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Editorials

Edgar L. Gilcreest, M.D., F.A.C.S.

Edgar L. Gilcreest, long identified with the Surgical Department of the University of California Medical School, associate editor of the *Western Journal of Surgery*, and editor of the Pacific Coast number of the Surgical Clinics of North America, has honored this journal by accepting membership on its Board of Contributing Editors. The interests of the journal in the West, and particularly on the Pacific Coast, will be greatly furthered by this distinguished affiliation.

After the Seven Lean Years

The experts tell us that we are really making a "reasonably continuous industrial recovery." The National Chamber of Commerce announces that 1936 as a whole will be the best year in physical volume of business since 1929. Recovery, it seems, always has come at this stage of the business cycle, regardless of political factors.

Assuming the correctness of these prognostications, and assuming notable and widespread prosperity in the near future, the *New York Times* looks for the disappearance from the scene of the public nuisances who, under the cloak of depressions, peddle crazy social and economic makeshifts to the people. This happened in 1874 and in 1894. "Genuine recovery in business puts a summary end to them."

So will pass much of the crazy planning for medicine on the part of starry-eyed cranks who, for a time, have lived amid distress that was a paradise to them.

Odd Stirrings of a Corpse

Under the democratic forms and methods that characterize our social procedures one is sometimes exasperated by the interminable discussion, by the failure to reach decisions, and by the failure to act. One sees this fumbling in the most important affairs of state, and one observes it in the proceedings of medical societies whose business is of no great moment.

Occasionally the most absurd situations arise on this basis. One of the most preposterous that we have encountered is exemplified in the recent history of a local medical society. For a long time this society has had a very small attendance. There were usually fewer than twenty physicians at the meetings, of whom not more than half were members. The few faithful attendants were mostly members of the Council. Thus there was almost a total lack of interest and this state of affairs continued over a period of several years. It could truly be said that the society was useless to the community. Out of a membership of three hundred and fifty only a handful seemed unbored by the society's proceedings. Thus the basal metabolism of the outfit was running at about —100.

Certain cells of this dying if not wholly dead organism, in the shape of one or two practical officers of the society who were realists with a conscience and perhaps some sense of humor, resolved to dissolve the moribund—really defunct—society. So a special April meeting was called and proxies were called for upon which a voting member could by mail express his position on dissolution, letters having been sent out explaining what a bore to most of the members the society had become and how embarrassing the meetings now were. It was further explained that a resolution had been introduced at a meeting in January (of the faithful corporal's guard) which called for the dissolution of the society and which had been laid on the table at the time in order that legal technicalities might be studied.

Two hundred members roused themselves from their lethal state to vote by proxy in favor of dissolution and three voted by proxy against dissolution, but not enough votes were mustered in this way at this special meeting legally to dissolve the corporation, since a two-thirds affirmative vote was necessary. Only seven members turned up in person at this meeting, one of whom

voted against dissolution, with two apparently in too deep a lethargy to vote at all.

It is clear that this society is practically dead and is consequently unable to resuscitate enough of its members to certify to the fact. Nevertheless, an October meeting has been called at which another "effort" is to be made to determine whether or not rigor mortis has yet set in.

It appears that four members deny that death has taken place, two hundred and four insist that there are already signs of decomposition, while approximately one hundred and forty members who have not been heard from at all have obviously convinced themselves that the final obsequies were long since held.

The coming October meeting will not be a macabre event, but one calculated to add to the gaiety of the community—perhaps of the nation.

Backwardness in the Sphere of Syphilis

The more shame to us, the despised tabloids took the lead in teaching the public the truth about syphilis. But we lag, even in the strictly scientific sphere. Take a look at the Quarterly Cumulative Index Medicus and see how overwhelmingly the Europeans are ahead of us in the study of congenital syphilis. Out of 141 articles listed in the 1935 Index 20, or 14 per cent, are of American authorship. Mulot, of Brooklyn, declares our literature on congenital syphilis "lamentably meager and woefully inadequate." He further says that "congenital syphilis, both in textbooks on syphilis and in textbooks on pediatrics, is treated so superficially, so unscientifically and so unsystematically, especially as to pathology, that anyone familiar with the foreign literature on the subject is astounded and shocked."

The Future Extension of Fever Therapy in Syphilis

It will probably not be long before fever therapy in syphilis will not be so limited as now. For example, it will presumably supplement drug therapy more and more in the treatment of Wassermann-fast cases and will in time, combined with chemotherapy, have a definite place in the cure of ordinary early syphilis.

If it is so good in paresis why not all along the line, at least as a supplementary measure?

The 1935 European literature contained a few contributions bearing upon the results of this type of therapy. In America the paper of Epstein and Cohn appeared (*J.A.M.A.* 104:883-889, March 16, 1935) on the effects of hyperpyrexia alone on early syphilis (results not impressive). Walter M. Simpson (*J.A.M.A.* 105:2132-2140, December 28, 1935) and J. E. Kemp and J. H. Stokes (*J.A.M.A.* 92:1737-1740, May 25, 1929) have offered additional evidence with respect to the value of the combined type of therapy. Neymann, Lawless and Osborne reported seven cases treated successfully with combined therapy—negative serologic reactions in an average of forty-two days; no clinical or serological signs for periods ranging between five and eighteen months; results of treatment in seven other cases with hyperpyrexia alone not impressive (*J.A.M.A.* 107:194-199, July 18, 1936).

It is true that some syphilologists think that in early syphilis there should be greater reliance upon *continuous* treatment with arsenicals and mercury, after the fashion of Keidel in this country (1916) and Almkvist in Europe (1920), and that running after strange gods will jeopardize good methods that have not been sufficiently employed.

The Significance of Resistant Serologic Reactions

A. G. Morgan, of the United States Public Health Service, has studied the experience of many syphilologists with respect to resistant serologic reactions. Resistant reactions have been classified as: 1. Manifestations of active syphilis with visceral or nerve lesions; 2. Signs of syphilis without visible lesions; 3. Phenomena in cured patients who still produce antibodies by "a sort of habit"; 4. Evidence of too active treatment which produces antibodies as a defense reaction. It is an interesting fact that discontinuance of treatment will sometimes produce a negative reaction.

It has been held that the significance of resistant serologic reactions depends upon the stage of the disease. In relatively early syphilis persistence is serious, recurrences are the rule, and intensive treatment is called for, whereas in late syphilis persistence is not serious if the spinal fluid is negative.

Persistent reactions without clinical

symptoms are not considered a sufficient reason for indefinite continuance of treatment. Nor is it always desirable to change a positive reaction into a negative one; for while in most cases a positive reaction means danger it may also mean that the organism's defensive mechanisms are working well.

"A positive reaction does not necessarily mean a bad prognosis any more than a negative one necessarily means a good prognosis. A patient having a quiescent syphilitic infection with a focus of spirochetes somewhere in a gland is not necessarily any more infectious than a tuberculosis patient with a more or less calcified hilus gland that contains tubercle bacilli."

The treatment of patients must be individualized. Neglect of treatment of early syphilis and lapse from treatment in the first year are the principal causes of persistent reactions. Early treatment must be active and uninterrupted because of reversal of the reaction. Positive reactions alone should not determine continued treatment in late latent syphilis.

Only about 6.2 per cent of cases should fail to become permanently negative under continuous treatment, if followed up from the earliest stage for two and a half years.

A Warning from Confucius

Twenty-four centuries ago Confucius said: "Thought without learning is dangerous." This saying has a profound significance. It is true that human progress depends on thought—speculation—open-mindedness to new ideas; but this thought must be guided and controlled by knowledge, or it is liable to lead into dangerous courses. Right thinking is based on facts.

Political theorizing is stimulated by social disturbances. For dealing with most social troubles civilization has developed methods of procedure of tested efficiency. But there are people who cannot wait for the operation of these established methods; they want quicker action, or they want something new. And some of those who lack knowledge to enable them to think straight, but possess a restless mental activity, may get a hearing for their "thought without learning" in troubled times which would be denied them in quieter, saner times.

Those of this type lightly overlook the danger of destroying institutions of established value on the uncertain chance of getting better ones. They do not realize the danger of substituting for established institutions the doubtful products of their "thought without learning." They are willing and eager to "rush boldly in where angels fear to tread."

Of the socialistic extravagances bred by "thought without learning" the one which would socialize medicine seems to be ahead of the others in America. The easy vulnerability of the poorly organized, altruistic and highly individualistic medical profession, and the large lack of understanding of medicine and of the practice of medicine on the part of the people generally, passively encourage socialistic attack.

If those who have "thought without learning," who would repeal the law of evolution, to say nothing of the laws of economics, should succeed in destroying the wonderful, complex, beneficent institution of medicine which constitutes one of the great glories and blessings of our present civilization, and should succeed in substituting for it an institution of socialized medicine, the resultant effect on human health and happiness is not pleasant to contemplate.

Those who have "thought without learning" do not realize how deplorable this effect would be. That, however, they would learn in the hard school of experience. Unfortunately, the expense of this education would fall heavily on those who have not deserved to be so taxed. —E. E. C.

No Golden Age with Leaden People

Compulsory health insurance will not work *fairly* under a capitalistic system, since employers will pass on the cost to employees in the form of lower wages and higher prices. There is no logic in collectivist medicine unless one conceives of the completely socialized state. And completely socialized medicine would not work *efficiently*, since individualism and initiative would be in evidence only at the top, with all below bureaucratized.

Still there is logic in the socialization argument. For a society willing to be socialized a relatively low grade of medical service would in a sense, be suitable and fair. *It would be good enough for it.*

Violent Death Today and Yesterday

Statisticians point out that in ancient Greece people following peaceful pursuits

suffered violent deaths in only a slightly higher percentage than do the same class of persons today. The figure which was characteristic of persons following peaceful pursuits in antiquity was about 12 per cent. Our modern figure is about 9.5 per cent.

The ancients' long journeys were very risky; brigands took a heavy toll. A storm at sea which modern vessels ride easily would have meant wreckage and death to the frail craft of former days.

The automobile aids mightily in keeping us near the ancient figure. The whims of our tyrants and dictators, making as they do for war, may yet bring us abreast with the ancient world. It is even possible that we will win in the contest.

The Clinic Scandal

One looks on at the busy clinic with its not-so-poor looking, able-to-buy-lottery-tickets clientele, and at the long lines of that clientele's waiting cars stretching for blocks on every side of the hospital. One listens to the raucous calling of the patients' numbers and the scurrying of the called groups through the mob of figures. One shudders a bit.

The scene changes and we look into the empty private offices of the same clinic doctors.

Are these mobs getting what they want in the clinics? A not-so-high grade of service for nothing, with which they are satisfied because it is better than nothing? Are they right in this view?

If this medical talent was of really high grade would it be content to work for nothing in the clinics? Is its sense of inferiority justified?

Does a thing which commands nothing—because it is perhaps worth nothing—in the way of payment from clinic or community sources, deserve to be paid for what it offers in the private office?

The Springs of Our War Paranoia

Many forces unite to decimate the race from time to time, seemingly in response to compelling necessities of nature—pestilence, race suicide, criminal violence, traffic fatalities, war mongering, and "international paranoia."

The lavishness of nature in wasting her units to achieve some end is obvious enough. Edward Larocque Tinker has asked whether our human "war paranoia" may not be akin to the fatal urge of those Norwegian rodents, the lemmings, which, whenever they become too numerous for the food supply, "voluntarily" trek to the sea by millions and there drown themselves, "martyrs to the well-being of their race."

But Tinker also asks: Are we really lemmings or just dupes?

A Pickwickian Crusade

The American press of August 7 carried news to the effect that the crusade of an Ontario mayor to sterilize the unemployed would be studied by a special legislative committee. The mayor was quoted as saying that unemployed families were "extremely indifferent as to whether they ran up hospital and relief bills by having children."

But this mayor himself is a small-town politician, not engaged productively. His position is therefore somewhat similar to that of the unemployed.

The intellectual processes of this mayor are typical of too many eugenists.

Osteopathy and the Politicians

According to H. Allen Smith, staff writer of the *New York World-Telegram*, a major political figure is on the osteopathic side—definitely and unequivocally. The headline reads "Osteopaths and —— have Secret . . . . 2,000 doctors at convention here chuckle over word from ——." Smith goes on to say that "two thousand American osteopaths, in convention this week at the Waldorf-Astoria, have a big, luscious, juicy secret, which has them whispering in corners and behind hands. They are happier perhaps than at any of the thirty-nine annual conventions they have held in the past." Apparently the osteos' "secret" is that the "major political figure" gets his osteopathic treatment regularly every week.

In a recent issue of the *Consumers' Research Bulletin*, Paul Luttinger pointed out that $45,000,000 is wasted each year in this country through useless manipulations of this sort.

Here is a rough-and-ready index of the cultural stature of one politician.

M. W. T.

FUNCTIONAL AND ANATOMIC EFFECTS OF COLITIS OF LONG STANDING

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Division of Medicine, The Mayo Clinic

Two distinct types of bodily changes have been found to follow in the wake of chronic colitis of the "ulcerosa gravis" type. One concerns serious disturbances of function which affect bodily growth, metabolism, and so forth; the other, which has the characteristics of disease entities and produces a variety of symptoms, often affects remote parts of the body. The latter is in the nature of severe secondary organic disease.

Functional Derangements

When chronic ulcerative colitis attacks children in the first decade of life, it is severe and destructive, and if adequate treatment is not at hand, it is likely to disturb all functions of the body.

Growth is one of the most important of these functions. A child who has severe ulcerative colitis frequently will stop growing. Not only will growth remain stationary for years, but, as a result of great loss of weight, loss of turgor of the tissues, and subsequent wrinkling of the skin, the child will appear to become smaller.

Case 1.—A boy, aged sixteen years, who came to the clinic September 11, 1935, had had severe chronic ulcerative colitis for nine years. He was 53 inches (134.6 cm.) tall and weighed 53 pounds (24 kg.). Obviously, his growth had not advanced beyond that which is normal for a boy aged seven years, but he had some of the features of a much older boy. His condition had been stationary after the first year of his severe illness. He had had a dozen stools a day for several years. The diagnosis had first been made at the age of fourteen years, and ileostomy had been advised as the only treatment. After thorough study at the clinic, the usual systematic treatment, with serum, diet, and so forth was employed. His hematologic picture was that usually seen in these cases, that is, there was an anemia that was characterized by deficiency of hemoglobin, a slight leukocytosis, and a great preponderance of nonfilamented polymorphonuclear neutrophils. (1) He improved slowly and progressively, and when he left the clinic after twelve weeks, his weight was 66 pounds (29.5 kg.). His bowel movements had been reduced to two or three every twenty-four hours, and most of them were formed.

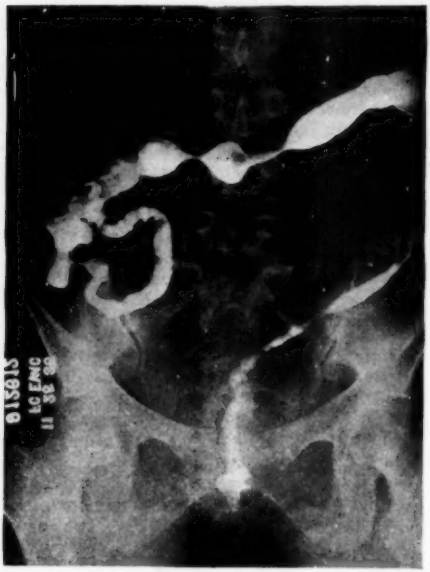
Case 2.—A boy, aged seventeen years, came to the clinic December 30, 1933, because of severe chronic ulcerative colitis which had been present for ten years. He had had twelve to fifteen stools a day for years. His weight was eighty-three pounds (37.6 kg.) and his growth had not advanced beyond that of an eight year old boy. He had daily fever of 101.5°F. The usual systematic treatment produced slow but progressive improvement. At the end of twelve weeks, he had gained 20 pounds (9 kg.) and was averaging four semiformed stools a day. He continued to carry on this type of treatment in a relentless fashion at home. He took vaccine periodically, sun baths, carefully planned recreation and exercise, and ate food which was high in calories and low in residue. When he returned for periodic examination in September, 1935, his weight was 139 pounds (63 kg.), and he had grown 6 inches (15.24 cm.); his appearance from every standpoint was that of a well boy.

Many similar cases have been brought to my attention. Just how long the condition of failure to grow, and chronic invalidism would continue it is impossible to say, but these cases seem to emphasize the importance of persistent systematic treatment. While the growth of these children had been stationary after the first year of the disease, and weight had either been stationary or had decreased slowly, within a few weeks after the institution of adequate treatment

Read before the meeting of the Ocean Medical Society, Brooklyn, New York, April 20, 1936.

the weight gradually and progressively increased, and within a few months the patients began to grow steadily in height. On the other hand, without continuous systematic treatment such children have been known to die of gradual inanition

Fig. 1



Destructive colitis which has produced marked narrowing of colon.

and exhaustion, or of one or the other of the serious complications which may afflict patients who have this disease. Such a stationary condition of growth may be the cause of considerable anxiety on the child's part, but as distressing as this may be, the effect of continuous uninterrupted dysentery has an even more disastrous effect on the child's psychology toward other children and those about him. There develops a feeling of dependence on others. The mother-and-child complex in these cases is often very difficult to overcome. The child dares not go far from a toilet. He dares not mix with crowds for he feels his utter helplessness when seized suddenly with a desire to defecate. His mother may have found it advisable for him to wear rubber panties, and in his late teens, he is utterly dependent on them. As a result of these factors, he will grow up as a "child recluse" and if he is mentally alert, as many of these children are, his education will become very one-sided. Indirectly, then, the colitis will have a profound effect on his social status.

A further and even more damaging situation may be produced by the change in intestinal function brought about by the diarrhea of long standing. Every morsel of food and every drink of liquid may initiate a peristaltic rush, and whereas an adult might be able to restrain this, a child will dash for the toilet at the slightest provocation. He may go many times during a single meal. Through the months and years of trouble, intestinal peristalsis will be whipped up to a degree that is hard to overcome, so that long after the bloody purulent rectal discharges have ceased, frequency of evacuation may persist. Two factors then will play a part in the adequate handling of metabolic products by the intestine, particularly proteins and other end products of digestion. There will be failure of absorption as a result of too rapid elimination, and because of intestinal destruction. Consequently, nutritional disturbances of various kinds may occur. One of the most common of these is the failure of adequate assimilation of protein, and the subsequent edema and reduction of serum proteins to dangerously low levels.

Anatomic Changes

Chronic, destructive colitis may in time affect nearly all tissues of the body. I shall take up these changes in the order of their frequency and the severity of the damage of various organs. It may occur to some that this order is not adhered to strictly enough, but when considered in the aggregate, both from the standpoint of frequency and destructive changes, I believe that the conditions, which are listed, follow this thought rather closely. Studying a large series of cases from this standpoint, it becomes increasingly apparent that this disease is one which produces grave, disabling, systemic effects.

Intestinal wall.—There are those who still speak of this disease as of mucosal origin, with the thought that the earliest and the greatest damage occurs in the mucous membrane. It has been demonstrated that this disease affects the wall of the bowel primarily, and involves the mucosa only secondarily. The earliest microscopic changes recognized in the wall of the colon are small lesions associated with edema and hemorrhage. These often are roughly pyramid-

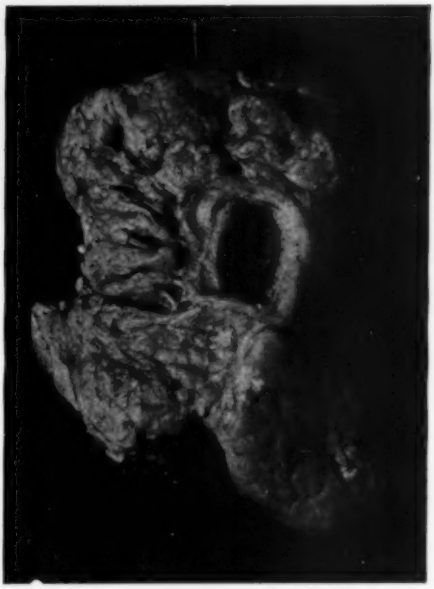
al in shape. The capillaries of this region are dilated and packed with erythrocytes. Some of the erythrocytes seem to have spread throughout the adjacent tissue, giving the appearance of a red infarct. At the

Fig. 2a

Extensive colitis which has involved a rather long segment of ileum.

base of this region, deep in the mucosa and submucosa, capillary vessels are occluded by tissue débris. The capillaries seem to originate from occluded vessels deep in the tissue, and finally distinctive branches of blood vessels, filled with homogeneous thrombi, can be made out. The limiting membrane of the surface of the mucosa may be intact at this time, and this gives the impression that the initial disease originates there and not through some material introduced from the lumen of the bowel, which has caused abrasion and necrosis of tissue. The relation of these hemorrhagic lesions to the occluded vessels is apparent. The edema of the mucosa, seen through the sigmoidoscope, is not often observed at necropsy, because it undoubtedly is of very short duration. Furthermore, it is not readily maintained in fixed tissues. However, it has been seen in some instances. At about this stage of the disease, numerous diplostreptococci are demonstrable in the intestinal wall. In some of the fulminating cases they have been isolated from the blood stream, and from this it is understood that the infected infarcts might result in minute abscesses; hence, in the third stage of the disease they appear as minute, roughly pyramidal regions of necrosis surrounded by hemorrhagic zones. In the necrotic center lie many polynuclear cells in a mass of disintegrating tissue, and the limiting membrane is covered with exudate. These tiny abscesses have no relation to the lymphoid follicles, for intact follicles are found in spaces between these necrotic regions. No lymphoid tissue is seen in the immediate region of the abscesses or ulcers. The necrotic portions, at first minute, are so numerous as to become confluent, and so, large stretches of colon are involved. Inasmuch as nothing retains the minute abscesses except a thin outer membrane, the

Fig. 2b



Size of the intestinal lumen at the sigmoid flexure.

slightest trauma will uncover the tiniest bleeding or purulent point. Microscopic sections of the walls of these colons will show how very close to the lumen of the bowel these abscesses lie, and so it can be readily understood why a mere touch of the membrane will result in ulcer. The thickness of the wall of the bowel, noted grossly, is very

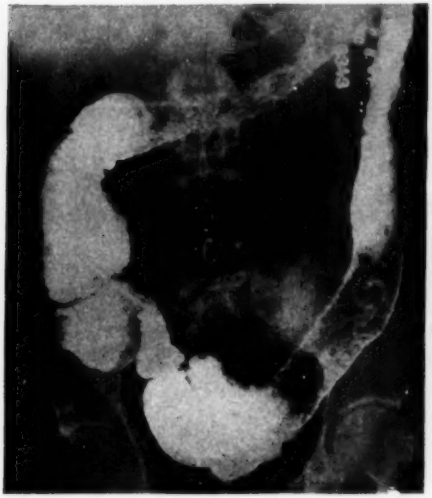
striking microscopically, and through it there will appear diffuse infiltration of lymphocytes and plasma cells, and in the regions adjacent to the more acute processes, polymorphonuclear cells predominate. Disseminated through these acute phases of the inflammation there may also appear evidences of healing. Regeneration of mucosal cells may be seen in the more advanced cases of healing and this may be the basis of the pock-like scar which is so constantly seen after healing occurs.

This detailed pathologic description of the origin, inception, progress, and culmination of this disease has been given because it seems so important for a clear understanding of the destructive nature of chronic ulcerative colitis. It gives at once the reason why improvement from this disease is slow, and even though healing of the wall occurs, the danger of relapse is always at hand.

Occasionally, isolated segments of colon are involved, either singly or in several regions, by a pathologic process similar to that which has been described. Occasionally, too, but late in the disease or after repeated severe exacerbations, the lesions will pass the ileocecal valve to involve the terminal portion of the ileum. The process in the terminal portion of the ileum is rarely if ever as severe or as advanced as is that in the colon. The following case illustrates how erroneous is the conception of the mucosal origin of this disease.

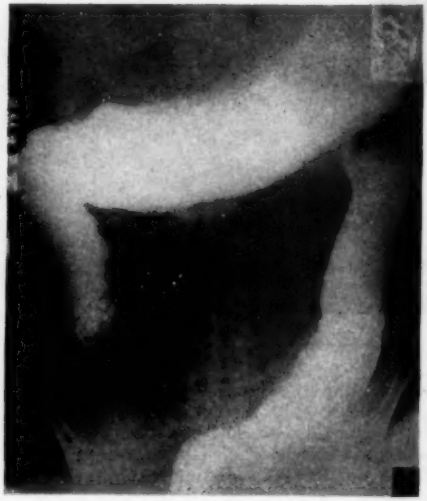
Case 3.—A married woman, aged thirty-three years, came to the clinic November 18, 1935. For three years she had had progressive chronic ulcerative colitis with evidence of advancing disease. The average daily number of stools had been fifteen to twenty; the number of stools had been increasing slowly and progressively during the three years of her illness. There had been some periods of improvement but no real remissions. There was a marked ascites, which had developed during the month prior to her admission to the clinic. Roentgenologic studies revealed extensive destructive disease of the entire large intestine and distal portion of the ileum (fig. 1). Because of the marked ascites and the very advanced disease, and because she had not made satisfactory progress after adequate medical management elsewhere, ileostomy was performed. At the time of operation, extensive cirrhosis of the liver and advanced disease of the colon were found. Death occurred on the tenth postoperative day.

Fig. 3a



Extensive mucosal destruction in colitis of long standing.

Fig. 3b



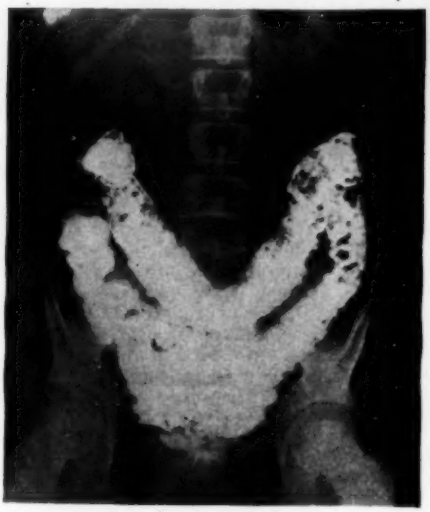
Roentgenogram made four years later, when patient had recovered clinically.

Necropsy revealed extensive colitis, marked narrowing of the colon, and involvement of a rather long segment of ileum (fig. 2). The cirrhosis was apparently a condition secondary to thrombosis of the hepatic veins, which had occurred about a month prior to her admission to the clinic. Ascites had occurred secondary to the venous thrombosis.

The following case illustrates the nature of the pathologic process.

Case 4.—A dentist came to the clinic in November, 1931, because of continuous bloody dysentery which had been present for two years. Intermittent dysentery had been present for ten years before it became continuous. Roentgenographic examination revealed massive involvement of the wall of the colon and secondary mucosal destruction (fig. 3*a*). As a result of appropriate medical management, this patient has been entirely free from all intestinal symptoms since September, 1933. A roentgenogram of the colon which was made as late as January, 1936, revealed a return of colonic haustration (fig. 3*b*).

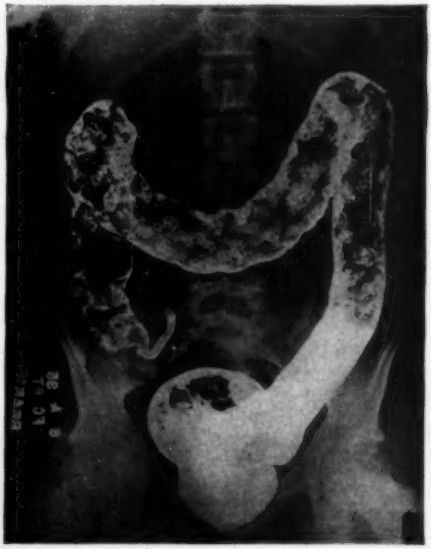
Fig. 4a



Chronic ulcerative colitis which has produced extensive mucosal destruction.

These observations make it clear why polyps are outstanding pathologic features of chronic ulcerative colitis. They develop as sequelae of severe secondary mucosal destruction. There is great undermining of the mucous membrane with coalescing of the ulcers, but regardless of the amount of destruction, some portions of mucosa may preserve their blood supply. Mucosal tags left in this way will stud the surface of

Fig. 4b



The lining has healed but polypoid mucosal tags remain.

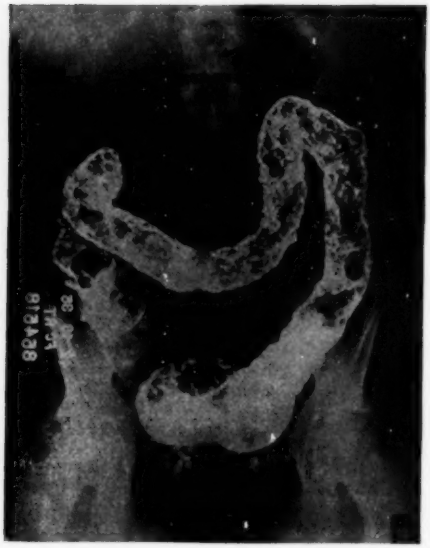
the large intestine. With healing, they become rounded. Fibroblasts are proliferated and cicatrization occurs. Tubules of polypoid projections then are occluded and finally the characteristic pseudopolyps develop. Elevation of these thickened portions of original mucous membrane results in increased friction and traction, and, finally, in the formation of polyps with pedicles. Such a condition of polyposis has been found in from 10 to 15 per cent of all cases of chronic ulcerative colitis. Sometimes, these polyps become large and are associated with adenomatous change.

The following case illustrates the entire gamut of severe destructive chronic ulcerative colitis, pseudopolyposis, and, finally, the development of multiple adenomatous polyposis.

Case 5.—A boy, aged sixteen years, came to the clinic on March 19, 1934, because of severe bloody dysentery which had been

present for two years. He had been very ill for many weeks and his fever had reached 103° F. His greatest weight had been 100 pounds (45.4 kg.) but he had lost 40 pounds (18.1 kg.). When he first came to the clinic, he was averaging fifteen bloody stools every twenty-four hours. There was a moderate secondary anemia and the leukocytes numbered 15,800 per cubic millimeter of blood. The differential blood count revealed that 70.5 per cent of the leukocytes were polymorphonuclear neutrophils, and that 68 per cent of the latter were non-filamented and only 2 per cent were filamented cells. Roentgenologic examination revealed chronic ulcerative colitis of the entire colon, and marked mucosal destruction (fig. 4*a*). The usual medical management produced striking and progressive improvement. The patient returned home after a month's stay at the clinic. He improved steadily and returned for a re-examination in Setpember, 1934. By this time,

Fig. 4c

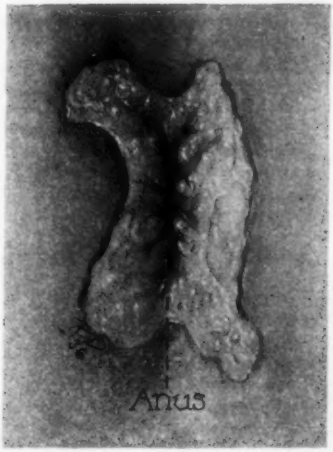


Many true polyps have replaced the mucosal tags.

his weight had returned to 99 pounds (44.9 kg.). Roentgenologic studies at this time suggested improvement of the colitis but great irregularity of the mucosal surface of the colon was suggestive of polyposis (fig. 4*b*). A further examination in December, 1935, revealed chronic ulcerative colitis with extensive, diffuse polypoidosis (fig. 4*c*).

One can readily see why neoplastic change occurs in some of these cases. In more than a third of the cases of chronic

Fig. 5



Extensive ulcerative colitis which has involved the anal sphincters and perianal structures.

ulcerative colitis in which carcinoma later developed, polyps were found in the rectum in the period during which the colitis was observed. The polyps seemed to develop as a polypoid hyperplasia in the residual mucosal tags and islets of mucous membrane. Furthermore, in 60 per cent of the cases in which carcinoma was associated with chronic ulcerative colitis, polyps were found at the time carcinoma was diagnosed. These facts strongly suggest a neoplastic factor in chronic ulcerative colitis. Actually, in 2.5 per cent of cases of chronic ulcerative colitis, carcinoma appears during the progress of the disease.

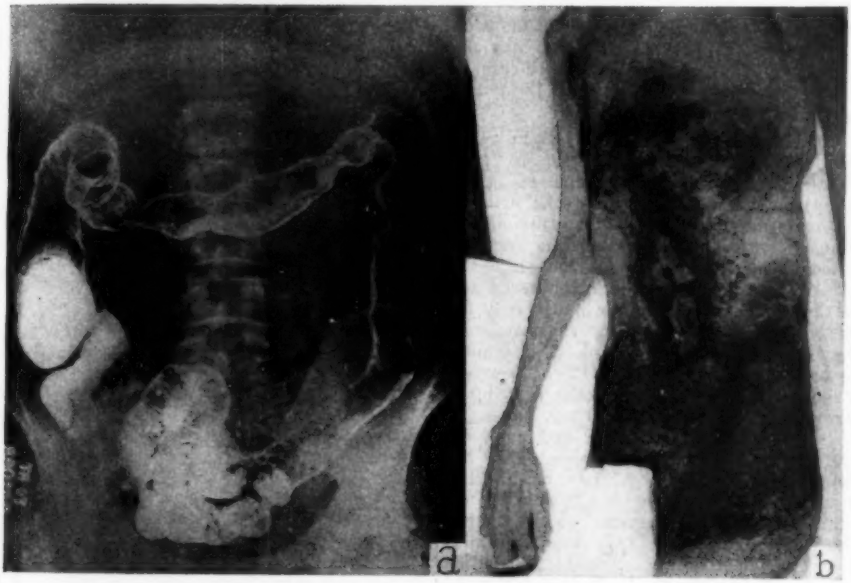
Case 6.— A boy, aged nine years, first came to the clinic in 1915, because of chronic ulcerative colitis which had been present for three years. The disease involved the entire large intestine. He was under observation for his colitis for twelve years. During this time, there were periods of remission and exacerbation, and finally what appeared to be complete healing. However, at the age of twenty-one, an acute recurrence of symptoms occurred, and three months

from the initial recurrence of symptoms he died of extensive adenocarcinoma, grade 4, of the colon, and extensive metastatic lesions in the liver.

Many similar cases could be cited. They would merely mean repetition of stories similar to this.

Another serious organic change secondary to advancing chronic ulcerative colitis is colonic perforation. This may occur at any stage of the disease, but is more likely to occur when there has been massive mucosal destruction. In one case, it occurred when the progress of the disease had apparently been stopped. The patient's condition seemed to be improving when, with dramatic suddenness, the patient was seized with acute abdominal pain, rapid collapse

Fig. 6



Colitis which had been present for fifteen years; deformity and carcinoma of colon.

Extensive pyodermia gangrenosa of abdomen and thorax.

occurred, and death resulted in a manner much resembling that from a vascular accident. Fortunately, colonic perforation in this disease does not always occur in this manner. Sometimes, there is a slow oozing and an apparent walling-off of an impending abscess. Perforation has occurred in 2 per cent of 1500 cases. Its occurrence is more likely when other serious complications are present.

Irregular healing and scarring, which result in stricture, are other intestinal changes which may assume serious significance. When discussing stricture, one does not refer to the ordinary narrowing of the colon, which invariably occurs after one or more attacks of ulcerative colitis. This type of narrowing will be of interest only in a general discussion of intestinal dysfunction. I have considered stricture as a localized narrowing which decreases the diameter of the lumen to 1.5 cm., or less. Such narrowing may seriously interfere with the passage of the normal fecal current and normal rectal function. Occasionally, multiple strictures occur so that the lumen may become narrow in places, and cause a collection of pus in pockets. Since the institution of the present form of treatment, the incidence of stricture has become progressively less.

Another serious secondary change relating directly to the disease in the wall of the colon is infection about the rectum and anus. Perirectal abscesses and anal ulceration may become very serious lesions. They

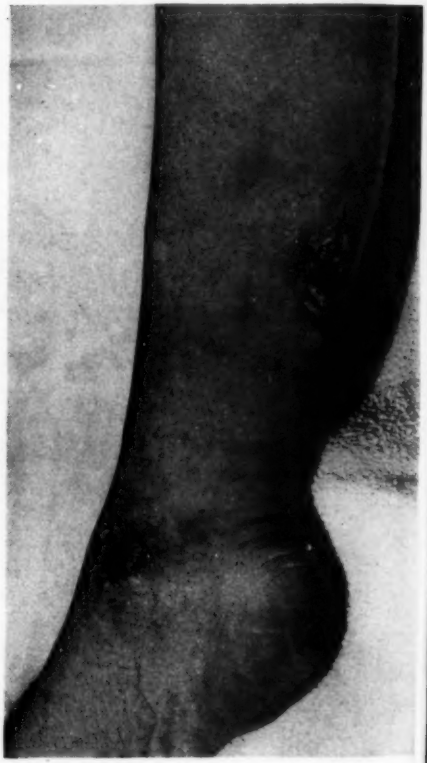
may originate in several ways, either by infection of anal crypts by the constant purulent drainage, or as a result of deep ulcers, which burrow beneath or to the side of the anal sphincter, and point as one or multiple perirectal abscesses. Radical operation is usually ill advised in these cases. Not infrequently, I have seen patients who had such severe anal and perianal ulceration that hemorrhoidectomy had been performed elsewhere without adequate examination of the rectal mucosa. In such cases, healing is unlikely and extension of the ulceration around this region is common; this finally results in an infected perianal region (fig. 5).

Lesions of the skin.— The cutaneous lesions of this disease are of several kinds but the most common is erythema nodosum. The nodular, tender lesions may be enlarged to 2 cm. or 2.5 cm. in diameter, and then may gradually disappear, or more often they will break down and may end in huge, sloughing, irregular ulcers in many parts. These ulcers are of the nature of pyodermia gangrenosa.

Case 7.— A man, aged forty-eight years, had had chronic ulcerative colitis for fifteen years. There had been a change in his symptoms during the four weeks prior to his registration at the clinic. During this time, in addition to the diarrhea that was associated periodically with blood, there had appeared cramp-like pains in the lower part of the abdomen. The pains had slowly but progressively increased in severity until they were the chief complaint. Occasionally, he had been nauseated. In 1928, "fourteen large infected ulcers" had been distributed irregularly over the body. They had begun as small pustules and then had coalesced and had left large raw surfaces. They had kept him in bed for three months, and had occurred during an exacerbation of the colitis. With improvement in the colitis, the ulcers had healed. They were beginning to recur when he registered at the clinic. Examinations revealed chronic ulcerative colitis of the entire colon, which was associated with carcinoma at the splenic flexure (fig. 6*a*). Because of impending obstruction, operation seemed advisable. Postoperatively, the cutaneous ulcers grew to alarming proportions (fig. 6*b*), and he finally died three months after the operation.

Lesions of this type have occurred in somewhat less than 1 per cent of cases of chronic ulcerative colitis which have been seen at the clinic. When they do occur, they are likely to be associated with other complications. In case 1 similar lesions occurred on the skin of the left leg and several other smaller ones occurred; all these lesions healed when the colitis improved. In some cases of very severe destructive colitis, as for instance in a case in which the patient was a woman, aged forty-seven years, the lesions occur on the legs alone

Fig. 7



Pyodermia gangrenosa; healing with subsidence of colitis.

(fig. 7). In this case, there was an associated thrombosis of the right popliteal artery. With improvement in the colitis, the lesion in the skin healed.

Vascular changes.— While clinical vascular damage in this disease is relatively rare, subclinical arterial and venous lesions frequently occur. This has been demonstrated

—Concluded on page 350

THE DIARRHEAS

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MOST patients with the symptom complex of diarrhea present a difficult problem to the clinician both as to diagnosis and treatment. Frequently after an extensive laboratory study is made of a case, including stool cultures, agglutination tests, proctoscopy and roentgen ray examinations, nothing is actually found to explain the condition. Brown, in a recent paper, states that "In fully two-thirds of the cases of chronic diarrhea encountered at the Mayo Clinic, there are no definite findings to explain the trouble." Other writers, while recognizing the frequent occurrence of this situation, do not believe that such a large number fall in this group. One is led to believe, therefore, that many of the unexplained diarrheas are probably of nervous origin. We are all familiar with the high-strung nervous type of individuals who get "running bowels" when under any increased emotional strain. In a brief discussion such as this, we cannot go into the mechanism of what happens in the gastro-intestinal tract of nervous people, when they get over-tired from work or pleasure, or fatigued mentally. Briefly, we may say that under such conditions, the secretion of the proper kind and amount of gastric and small intestinal juices is interferred with, food is not properly digested and prepared for absorption, and this improperly prepared food causes an irritation of the mucous membrane of the intestine with resulting diarrhea. The best way to relieve these patients is to treat the individual and not the diarrhea. Adjusting their mode of living, correcting their diet, and small doses of phenobarbital are helpful in curing this type of diarrhea.

Many of the unexplained diarrheas are probably allergic in nature. We realize more and more the rôle that food sensitization plays in many cases. These individuals get attacks of diarrhea after eating certain foods and they usually have other manifestations of allergy such as urticaria, hay fever or asthma. Frequently, there is a definite history of allergy in other members of the family. Finding the offending food or foods by utilizing skin tests in conjunction with addition or elimination diets will usually relieve them of this distressing diarrhea.

Some patients have diarrhea because their diet contains too much roughage. This I have found to be particularly true among Italians who consume large portions of the coarser vegetables at one meal, such as escarole, chicory, dandelions and spinach.

The cathartic habit is responsible for diarrhea in many patients. The daily use of nostrums advertised over the radio and suggested by their friends, which are supposed to correct constipation, to relieve aches and pains, to "cure" headaches and "clear the brain," frequently causes diarrhea.

Diarrhea is frequently a symptom in hyperthyroidism; however, these patients do not actually have liquid evacuations but an increased number of partly formed stools. Lugol's solution usually clears up this condition in a very short time.

The lack of hydrochloric acid in the gastric juice may be responsible for a morning diarrhea in some patients. These individuals, as a rule, are awakened early in the morning by an urge to move their bowels, and have several more movements about breakfast time, but seldom get further calls during the day. The administration of one-half to one dram doses of dilute hydrochloric acid in half a glassful of water, taken through a tube, with meals, is often beneficial in this group.

There are certain women who develop diarrhea at their menstrual periods. It may appear several days before the menses and continue during the period. I have had several such patients whom I have observed lately. Their menorrhagia and dysmenorrhea have improved and the diarrhea has been apparently cured by the judicious use of an ovarian and thyroid preparation and phenobarbital.

Other diarrheas which are less frequently met with are those associated with adrenal disease, pellagra, idiopathic steatorrhea (sprue, non- tropical sprue, celiac disease), and disease of the pancreas. About four years ago, we saw a number of patients at the Long Island College Hospital who had been living in shacks in what is called the Red Hook section of Brooklyn. These men

Read before the Italian Medical Society, Brooklyn, N. Y., February 4, 1936.

were existing on a very deficient diet, and they also drank cheap alcohol. They presented pellagra-like lesions of the skin, diarrhea, and sometimes edema and neurological symptoms. Most of them improved promptly on a well-balanced diet with extra rations of vitamins A, C, B and G, which are found in cod liver oil, fruit juices and yeast, respectively.

One may classify the above diarrheas as belonging to the functional group. The only way we can treat this type of diarrhea properly is by taking a careful and thorough history, and excluding a possible organic lesion by x-ray study, proctoscopy and stool examinations. Prescribing preparations of opium, bismuth, Kaolin, tannigen, tannalbin, etc., or advising the use of astringent enemas and colonic irrigations will do no good in these cases.

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The organic forms of diarrhea are associated with ulcerative lesions of the small intestine, usually the ileum, and of the colon.

Some time ago, the newspapers carried the story of a sensational and sordid murder case which occurred in a neighboring county. In this case arsenic, in the form of rat poison was put into the food of the victim. The trial brought out, among other interesting things, how very easy it is for a physician to miss the diagnosis, even when the patient is in a hospital. It is well to bear in mind that an unexplained diarrhea associated with vomiting, abdominal pain and marked prostration may be the result of an enteritis caused by some metallic poison, usually arsenic or mercury.

The terminal ileum is the site of ulcerations in typhoid and paratyphoid and the ileum and colon in the bacillary dysenteries. In the past few years, there have been an increasing number of cases of typhoid fever locally due to people bathing in the polluted waters of Jamaica Bay. Some have been traced to the eating of clams obtained from these restricted areas. We recall the epidemic of bacillary dysentery which occurred in Jersey City several years ago. It is well to remember that bacillary dysentery is endemic in New York City. Felsen, who has studied a number of these epidemics, is quite convinced that the distal or regional ileitis of Crohn and the so-called non-specific ulcerative colitis are probably chronic stages of bacillary dysentery. Or, may I put it in this way—Dr. Felsen, in a follow-up study of the cases of bacillary dysentery, over a period of several years, has observed that many of these patients develop ulcerative lesions in the colon and symptoms which cannot be differentiated from those occurring in chronic non-specific ulcerative colitis.

Chronic non-specific ulcerative colitis is a chronic, depleting and debilitating disease, occurring usually in young people. These patients have many rectal discharges of mucus, pus and blood, at times some fever, very frequently abdominal cramp-like pain and rectal tenesmus. Often associated with these symptoms are marked loss of weight, dehydration, and severe anemia. The distribution of these cases is pretty general. I recently prepared a map showing the locality of the cases we treated at the Long Island College Hospital and at St. Mary's Hospital, during the past ten years, and it was interesting to note that they came from all sections of Brooklyn and Long Island. I cannot go into the cause or causes of this disease for it would lead us into endless discussion. Briefly, I may venture the opinion, based on experience, that no one factor is responsible. Bargen's diplostreptococcus as the primary cause of this disease has been repeatedly disproved by many careful workers. We have found this organism in very few of our cases. I hope Felsen is on the right track and will be able to hook up many of these chronic non-specific ulcerative colitis cases with a previous attack of bacillary dysentery, to our complete satisfaction. A good deal of his work is very convincing, and he has a wonderful opportunity to follow up these epidemics of bacillary dysentery. After treating many of these patients, I am thoroughly convinced that there is a very decided neurogenic factor responsible for many of these cases originally, and responsible for recurrences. I believe also that food allergy plays a very important rôle and this is perhaps closely associated with the neurogenic factor. When these individuals are under a severe nervous and mental strain, something happens to their glands of internal secretion which perhaps alters their blood chemistry and causes them to develop ulcerations either in the stomach, duodenum or colon. The diagnosis of ulcerative colitis is made with the proctoscope. The ulcerations in the rectum should be differentiated principally from those caused by amebiasis which has become secondarily infected by bacteria. I have had a number of cases sent to me for treatment of their supposed chronic non-specific ul-

cerative colitis, in which, on careful study, we were able to demonstrate the *Endamoeba histolytica*.

The treatment is summarized as follows:

1. General hygiene: rest, mental and physical, sunshine or ultraviolet radiation, intravenous glucose and saline solutions and transfusions, iron, calcium and, frequently, parathyroid extract.
2. Complete clinical study: *a*. General—blood examinations, including culture, renal function studies, chest examination, including roentgen ray, dental, nose and throat, gynecological and genito-urinary studies. *b*. Gastro-intestinal—gastric analysis, gastro-intestinal roentgen ray studies, including the opaque enema, proctosigmoidoscopy, routine stool examinations and cultures, and allergic studies, including cutaneous tests and elimination diets.
3. Diet: high caloric, high vitamin and non-allergic.
4. Eradication of all infective foci and treatment of any other coexistent disease processes.
5. Mercurochrome, intravenously administered, beginning with a dose of 15 c.c. of .5% solution and increasing the doses, at 4-day intervals, sufficiently to cause a febrile reaction of 101.5° to 102.5° F. The effect on the kidneys is carefully noted, by means of daily urine examinations and occasional functional tests.

Tuberculous ulcerative colitis in the adult is always secondary to active Koch lesions in the lungs or larynx. It is due to the ingestion of infected sputa and the ulcerations are usually found in the terminal ileum and cecum. A diarrhea which persists in a tuberculous patient should be looked upon with suspicion. The diagnosis is made by finding the tubercle bacilli in the feces and the characteristic roentgen ray defects in the ileum and cecum. More extensive involvement of the colon occurs in advanced cases. The treatment is both medical and surgical, principally the latter, since a number of specialized surgeons consider all tuberculosis in their domain now.

Amebiasis or amebic dysentery is endemic in all parts of this country and at times breaks out in severe epidemics like the one in Chicago in 1933, during the World's Fair. Usually, a bloody diarrhea is the predominating symptom in this disease, but not infrequently cases are seen with no diarrhea and actually constipated. Because of our Maritime Service at The Long Island College Hospital, we see a number of these cases each year, among seamen from all parts of the world. We make it a routine practice to examinine the scrapings from the ulcerated rectal or sigmoidal mucosa for the *Endamoeba histolytica*, under a microscope equipped with a warm stage. Warm stool specimens are also sent to the laboratory for examination, but the former method gives us by far the best results. In the non-diarrheal cases, x-ray study of the colon often reveals typical ulcers in the cecum and ascending colon. Amebiasis should be ruled out in all cases of suspected liver abscess, for this is a rather frequent and very serious complication. The treatment is specific. Emetin hydrochloride gr. 1, hypodermatically, once a day, is given for ten days. Because of the toxic action of emetin on the heart, the patient should be watched for this complication during the administration of the drug. Up until three years ago, we further treated these patients with courses of ipecac administered directly in the small intestine through a duodenal tube. This method was efficient but cumbersome and distressing to the patient. We have had good results with chiniofon pills by mouth, four of these pills being given three times a day until 96 are taken, followed by a rest period of a week, when the same routine is repeated. Usually three courses of treatment are given. The scrapings from the rectal mucous membrane and the stools are examined after each course of treatment for amebae and cysts and, even though they are not found, the routine is followed just the same. Other preparations used are stovarsol, carbarsone and vioform. The stools should be examined for cysts at intervals of from three to six months thereafter even though the patient has no symptoms. The treatment is continued just as long as cysts are found.

Diverticulosis of the colon is a condition in which there are one or more pouches projecting from the wall of the bowel. The sigmoid is perhaps the part of the colon most frequently involved. It is more common in males and usually occurs after middle age. Frequently, diverticulosis is an incidental finding during a complete x-ray study of the gastro-intestinal tract. It produces little or no symptoms except when a diverticulum becomes inflamed, and the condition known as diverticulitis occurs. Diarrhea is observed in a few of these cases

and usually it is not a true diarrhea, but rectal discharges of mucus and pus associated with cramp-like pain in the abdomen.

Multiple polyposis of the colon is another rather unusual condition associated with looseness of the bowels and the occasional passage of blood. The diagnosis is made by x-ray examination of the colon and by sigmoidoscopy. Polyposis is of interest because of its tendency to occur in certain families, and because it is frequently followed by carcinomatous degeneration. We have successfully cleared up several of these cases with radiation.

Finally, carcinoma of the rectum or rectosigmoid junction must be ever in mind when a middle-aged or elderly patient presents himself or herself complaining of rectal tenesmus associated with frequent discharges of liquid feces containing mucus, blood and pus. Many of these patients can be cured by surgery if an early diagnosis is made. We should acquire the habit of doing a routine gloved finger examination and a proctoscopy on every patient with diarrhea, rectal bleeding or tenesmus. It is only by such a routine that rectal carcinoma will be uncovered in its early stages and referred to a competent surgeon with the hope of effecting a cure. We frequently see patients with well advanced and inoperable lesions, who have had symptoms for from three to six months, who, during this time, have not had a rectal examination done, and who have been treated for bleeding hemorrhoids, with rectal suppositories.

27 Eighth Avenue.

FUNCTIONAL AND ANATOMIC EFFECTS OF COLITIS OF LONG STANDING

(Concluded from page 346)

repeatedly at necropsy. However, it is only in the severe types of colitis that gross arterial occlusion and severe phlebitis are likely to develop.

In one case, in which the patient was a man, twenty-six years of age, sudden occlusion of the large arteries of one leg occurred, and several weeks later the large arteries of the other leg became occluded with progressive thrombosis of vessels. Gangrene of both lower extremities occurred, and necropsy revealed complete thrombosis of the lower part of the aorta and of the iliac arteries. The thrombosis had extended to the level of the renal arteries. There was complete infarction of one kidney and infarction of half of the other kidney.[1] A similar condition occurred in case 3. In this case the ascites and cirrhosis of the liver seemed to be the result of thrombosis of the hepatic veins.

Other anatomic lesions.— Other anatomic lesions, which are less frequent although, at times, severe, have occurred in the course of destructive ulcerative colitis. Splenomegaly of an infectious type occurs. Rarely, abscesses of the liver are seen. When the latter occur, they are always multiple. Arthritis is a fairly common sequel of long standing ulcerative colitis, but fortunately it seldom results in severe disability.

Comment

Both types of bodily changes, physiologic as well as anatomic, can be very disabling to patients who have chronic ulcerative colitis. These changes are emphasized to stress the importance of treating this disease early. No matter what ideas one may have about the etiology of this disease, it behooves one to treat the disease early and intensively, both from the standpoint of prescribed active treatment as well as from the standpoint of prophylaxis, in order that the damaging late effects may be prevented. The disease should be thought of in terms of other destructive infections, such as tuberculosis. Diagnosis should be made early, and treatment should be undertaken as soon as the diagnosis is established.

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CORONARY ARTERY DISEASE IN WOMEN

Hyman Levy and Ernest P. Boas, New York (*Journal A. M. A.*, July 11, 1936), state that in women, especially those under the age of 50, coronary artery disease is unusual in the absence of diabetes or hypertension. Yet precordial pain simulating angina pectoris is a common symptom. Although experienced clinicians have been aware of this fact for years, it is overlooked again and again in daily practice and many mistaken diagnoses result.

MINOR NEUROPSYCHIATRY

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THERE is an urgent desire among neuropsychiatrists to interest more practitioners of medicine in a method of approach, in the treatment of illness, which the neuropsychiatrist thinks should be part of every doctor's armamentarium. To create this interest every neuropsychiatrist must continue to write and "shout from the housetops" lest the laity become better informed in matters of psychological medicine than the average physician. Even today with neuropsychiatric education progressing at a rapid pace, until the specialty is now recognized among the other major specialties, it still appears that one of the greatest problems in neuropsychiatry is how to interest certain men of the profession, more especially those removed from large eastern medical centers and who are outstanding authorities in their respective communities. Most of these men have been out of medical school long enough to have well established practices; they were graduated from medical school when neurology and psychiatry received very little consideration, and in many instances none at all. To a neuropsychiatrist, whose medical school training was just of that character, the attitude of these physicians can easily be understood, and more so, since the modern ideas concerning psychiatry are based largely upon the convergence of psychology as an outgrowth of philosophy, on the one hand, with such ancient practices as miracle healing, charlatanry and empirical falsehoods on the other, none of which had a place in the teachings of an orthodox medical school of those days since not the slightest mention is made of physiological or pathological medicine.

Like a new sales slogan, the term minor neuropsychiatry, or minor psychoneurology as some may prefer to call it, should attract some interest since it appears to reduce neurology and psychology to such a simplified level as minor surgery and minor medicine. Minor neuropsychiatry refers actually to a very simple viewpoint, which signifies a personal interest in the patient by the physician, which in itself has much therapeutic value and which has been well expressed by Dr. Karl Menninger when he says, "The first principle in psychotherapy is that it is done by someone for someone else." Psychotherapy has existed since the art of healing began, but with the advent of specialization and the disappearance of the family physician it has "gotten away from us." The patient has become depersonalized, and we forget that he is a human being.

All physicians are at least minor psychotherapeutists. They should be willing to familiarize themselves with some of the more scientific principles of neurology and psychiatry, which will reveal that neuropsychiatry today urges that every patient should be viewed by the physician as a total functioning unit reacting to a life situation by means of his personality, which includes his physical, mental and social attributes, all of which are influenced both by the conscious and unconscious minds. That this integrated biological unit can only function by means of physiological and psychological mechanisms is quite obvious; one cannot be considered without the other.

Dr. Barker, already several years ago, made the following statement, "Physicians are students of biology of single persons. They observe the various ways the individual adjusts himself to environment—physical, psychical and social. Patients are persons who, for one reason or another, exhibit inadequacies of biological responsivity, biological adjustment or biological adaptation. It is the task of the physician to search for the cause of these inadequacies of response and to apply remedies that will either (a) restore responsivity to normal, (b) or lessen irresponsivity and mitigate personal and social suffering that results from it."

Dr. Franklin Ebaugh of Denver, Colorado, in an address to general practitioners, states: "Few practitioners think in terms of total functions of the individual or have a psychobiological approach to clinical problems encountered. A psychobiological approach occupies itself with the individual's performances, actions, reactions, attitudes, thoughts and experiences, response to the group or community to which the patient belongs, as well as his physical well being. The physician should always consider the individual biological equip-

ment, which includes his development, his basic appetites and eating, sleeping, matters of elimination, sex, expressive play activities, etc.; his intellectual make-up, his emotions and affective assets, built up in terms of life experiences, should also be carefully considered." Dr. Ebaugh also states further: "Many present-day practitioners defeat their usefulness by their attitude toward mental and nervous patients."

Dr. Lloyd Ziegler of Albany, New York, and others have spent considerable time in statistical studies of the interest of physicians in neurology, psychiatry and mental hygiene. All their conclusions were very much as those of Dr. Ziegler who states: "In the majority of communities the number of practitioners interested in such problems is entirely too small."

Many physicians approach unconsciously a neuropsychiatric viewpoint when they attempt to explain many undescribed conditions as the result of a disturbance of the endocrine system, which can readily be appreciated because of its relationship to the autonomic nervous system and the psychic. In so doing they feel that they are retaining the physiological and pathological conception of medicine. It is amusing to the neuropsychiatrist how such practitioners much prefer to discredit the influence of their own personalities in the recovery of their patients and give preference to their prescriptions. The question might be asked, what must be the physician's estimation of himself, and where is his self respect, when he allows much of the prescribing to be done by drug houses and detail men? This is happening! It should encourage the physician to respect his own personality more in establishing rapport with his patients and to admit the value of a neuropsychiatric approach without feeling that he has violated the teachings of his own profession.

There has been, and still is, plenty of reason why practitioners should be skeptical of the teachings and preachings of the neuropsychiatrists. The terms "bedlam" and "lunacy" are indelibly written on the pages of the history of care of the mentally ill; psychiatry is a descriptive science only recently emerged from a pessimistic, custodial attitude in the care of deteriorated personalities; neurologists and psychiatrists are still finding it impossible to agree upon any one acceptable theory as to the cause of abnormal behavior, to the point that a state of confusion still exists, resulting in two branches of psychiatry, the one calling itself "psychological and the other neurological—the one tending to modify disease by standing for a real mental variety of it, and the other maintaining a more traditional and restricted view, which looks hopefully for neural lesions." Actually five outstanding viewpoints can be found today, which are, to a considerable degree, parallel, yet different enough to be considered separately. They are the clinical, medical, neurological, psychobiological and psychoanalytical. It is largely because of the existence of these viewpoints that the majority feel that neurology and psychiatry should not be separated, and for that reason we have the terms neuropsychiatry or psychoneurology. Regardless of these different theories, in an attempt to explain symptomatology, the practitioner has no argument against the neuropsychiatric approach, which will enable him to understand his patient as a whole, rather than as a part.

To the family physician, the general practitioner, the specialist and the surgeon come daily a large array of patients, who present symptoms which cannot be explained upon an organic basis and who, upon the study of the total functioning individual, reveal they are the result, on the part of the individual, of failure to meet a life situation because of an inadequate personality, which may be a weakness of either his physical, psychical or social attributes. The failure might be primarily physical with secondary psychical symptoms, or the symptoms might be primarily due to psychical or social maladjustment, producing symptoms which might simulate an organic condition. It appears to me that in most psychical upsets some minor physical strain is usually present to precipitate the mental illness.

Most of these patients are classified among the psychoneuroses or lesser psychoses, the two groups being distinguished largely by the effect on the personality, which is only partially disturbed in the psychoneuroses, and markedly or wholly disturbed in the psychoses.

Most frequent among these patients are those whose symptoms are referable to a disordered functioning of the autonomic nervous system evidenced by states of sympatheticotonia or vagotonia with cardiac, gastro-intestinal, cerebral, diaphragmatic, vascular, dermatological, secretory and pupillary symptoms predominating. These cases are usually referred to as "anxiety states." Neuropsychiatric investigation re-

veals many conscious fears and unconscious anxieties, which in many instances can be attributed to sex conflicts and sex maladjustments, either dating back to a very early period in life or existing for some time prior to the onset of the symptoms. That the complexities of sex life driven by the libido, resulting from the instinctive urge of racial preservation, is an important factor in the method of human adjustment, is well exemplified in this group of patients. Not only sex conflicts, but other conflicts as well, enter into the formation of such "anxiety states" (To go further into the mechanism of these "anxiety states" is beyond the scope of this paper). No physician can fail to note that psychic and emotional conflicts are present in these cases if he takes a little time to inquire into their life experiences. In the beginning they cannot easily separate themselves from their symptoms, and they are disinclined to accept the explanation that a state of mind is responsible for them. The first, most essential, factor in the treatment is to develop in the patient the proper mental attitude toward his symptoms. Reassurance and an explanation of the physiological mechanisms of emotion, especially fear, and its psychological relationship, does much to start the patient in the proper direction. Recognizing these patients early will often prevent a most disabling psychoneurosis, resulting in a most grateful patient and a lasting friend. In many instances endocrine therapy, especially in the female, is helpful in alleviating symptoms aggravated by menstruation, frigidity and the menopause. Drugs which have a selective activity upon the sympathetic and parasympathetic nervous system can be used with great benefit and may be combined with mild sedatives. Relieving such symptoms of the autonomic nervous system will have much to do in helping the patient develop the proper mental attitude, even though the physical relief has nothing to do with removing the basic psychic factors. Alcohol is contraindicated since it has been noted that many cases of alcoholism have been due to "anxiety states." Barbiturates should be used cautiously as there is great danger of abuse of these drugs, just as with alcohol. Too many of these patients are finding their way to the neuropsychiatrist's office who have run the gamut of the specialties and in many instances tried various pseudo-practitioners or cults, only to say to the neuropsychiatrist, "Doctor, why didn't someone tell me of these things before, and why don't doctors pay more attention to the nerves?"

Perhaps next in frequency are those patients with "hysterical states," who present symptoms which can be produced by suggestions. In these cases the symptoms speak for themselves, as it were; the patient has very little to say except to reveal various types of paralysis, which may simulate organic states, but which, upon close examination, fail to conform to organic neurological patterns. In diagnosing this particular group of patients, one must be well informed as to their neuro-anatomy and understand the various reflexes and the sensory and motor changes which result from actual anatomical disturbances. Various types of stupor and convulsive states are frequently seen among this group. Many authorities attempt to explain these hysterical reactive states as the result of conversion mechanisms with definite reasons for defense, wish for gain or escape being quite easy to elicit. Many so-called "traumatic neuroses," wherein compensation is a factor, fall into this group. The similarity between hysterical reactions and malingering often presents a difficult problem.

Physicians encountering industrial injuries should consider the total personality of the patient because of the ease with which the slightest injury might precipitate a most disabling hysteria with much loss of time and expense. Busy industrial surgeons are inclined to pass over these cases too hurriedly, failing to recognize an unstable personality. Spontaneous cures among the "hysterical states" are well known, and quite frequently pseudo-practitioners receive the credit for the cure, only to have it broadcasted, much to the embarrassment of the medical profession. These cases respond usually to some form of suggestive therapy—electricity, heat, massage, etc., except when compensation is a factor, which cases rarely recover until their subconscious wish has, at least, been partially gratified. Many cases need major neuropsychotherapy and quite frequently the controlled environment of a psychopathic hospital is necessary; yet, there are far more who will be influenced and benefited by a proper neuropsychiatric approach and a conscientious physician.

There is another group of psychoneurotic patients, whose ailments are classified as the psychasthenias or the compulsive or obsessional states. These are the patients

who insist upon repeatedly telling their troubles, the majority of whom realize the condition is due to an upset state of mind, yet they are unable to do anything about it. They have a tendency to forget that time exists when relating their discomforts and readily tax the time and patience of any physician. They suffer great agony because of their compulsions, which often interfere with their efficiency. Minor psychotherapeutic measures are of little help to this group and, even in the hands of the most capable neuropsychiatrist, they are very resistive to treatment.

There is another well known group of patients whose symptoms are associated chiefly with extreme fatigue and complaints about various organs. These patients have long been described as typifying the neurasthenic or hypochondriacal states. Minor neuropsychiatry can do much to relieve them provided an early diagnosis is made. They find it very difficult to accept their symptoms, when referable to a certain organ, as being due to a psychic disturbance, and in the majority of cases there is very little evidence of symptoms resulting from a disturbance of the autonomic nervous system. It is especially this type of psychoneurotic who responds to the suggestive therapy offered by chiropractic and osteopathy, since their theories of "nerve pressure" fit the average neurasthenic's conception of a nerve influencing an organ. The neuropsychological explanation for these symptoms is found in psychic and emotional conflicts, conditioning reflexes or a faulty personality.

A group of patients whose symptoms approach very closely, if not actually, to a psychosis should be recognized by every physician. They are the most common and the most seriously ill, since the symptoms are predominatingly of a depressive nature and, at any time, might be the cause for suicide. These patients are blue, downhearted and have a feeling of misery and dejection. They cannot be "cheered up," and attempts to do so frequently only increase the depression. They are often self-accusatory; their appetites are poor and they lose weight; they may go to sleep easily but awake after a few hours unable to sleep any more. Some are more depressed early in the morning, others late in the evening; concentration is difficult and they find no interest in anything. Such patients need plenty of rest, and it has recently been observed that many are making phenomenal recoveries following enforced sleep or narcosis. These patients, in many respects, simulate the depressed phase of manic depressive psychosis. It is believed, however, that the manic depressive group is more of a constitutional variety of depression. In this group there is an affective disturbance, which might occur to any personality whose emotional equipment gets beyond control. Many of them give a history of the depressed state following some mild physical upset. For classification purposes they are considered affective reactive types. I have observed that many practitioners are inclined to over-exercise these patients in order to produce fatigue, which in most instances only increases the state of depression. There is some reason to believe that exhaustive factors of an organic nature may be responsible for the depressed state since the majority recover with rest and forced feeding. Because many of these cases are not regarded as serious depressions, they are treated outside of the sanitariums without restraint; the seriousness of the condition not being realized until suicide has been attempted or completed. It cannot be emphasized too often that every depressed patient is a potential suicide, and usually the one who displays the least indication of it is the one who must be guarded very closely.

Many other mild behavior problems find their way to the physician's office. Often they are just people in trouble, anxious to "pour out their hearts" to a sympathetic listener yet too ashamed to admit it. Other patients are brought by relatives with behavior and attitudes which result from personalities neither normal, psychoneurotic nor psychotic. These patients are more than likely to be constitutionally misfit or inadequate, and many are responsible for a great deal of the "trouble in the world."

With the exception of the constitutional psychopathic personalities most of these psychoneurotic states mentioned above occur in personalities whose ideals and principles are those of very good people and who contribute a great deal to civilization. That they have more difficulty in adjusting themselves is quite apparent, yet among them are many who are the "salt of the earth." Neuropsychiatric study and analysis reveal that the majority of these patients have reached adult life reflecting a faulty childhood environment, having experienced infantile difficulties which molded a personality pattern influenced by fear and

modified by conditioning reflexes. Many psychoneurotics cannot afford to be relieved of their psychoneurotic symptoms since such symptoms defend the personality from a patient's own lack of self respect (this, of course, being entirely unconscious on the part of the patient). For this reason, adjustment in life, such as it is, can only be made because of these symptoms, a removal of which would be detrimental to the personality. They will remain invalids and will need the guidance of an understanding physician with a neuropsychiatric point of view.

One of the most outstanding factors in the treating of these patients is the personality of the physician. There are many physicians who have natural talents and ability in their personality to be good psychotherapeutists. This is well exemplified in the large practices which many physicians have. The personality of the physician is responsible for the establishment of an early rapport which is always necessary before psychotherapy will be effective. These patients obtain great relief from bringing out into the open the experiences of their lives, which often enables them, as well as the physician, to visualize their conflicts; which is often referred to as aeration or "talking it out." The physician should be a good listener, and his chief aim should be to influence the patient in the right direction in his attitude toward himself, his physical and his social attributes. The patient should be taught something about the physiology of the emotion fear and its mechanism. He should be taught to realize that life is made up of unpleasant situations, which all have to meet before progress can be made. In some instances, the patient will become desensitized to his unpleasant experiences following repeated expression of them until the emotion concerned disappears; quite important is desensitizing the family by avoiding an over-solicitous attitude. Many patients need re-education; too few know how to play and enjoy leisure; others need more faith and more religion.

If our physicians will give cognizance to minor neuropsychiatry in treating the frailties and frustrations of their fellow men and develop a broad and deep personal interest in each patient, as well as in his physical well being, they will control the art of healing, and the patient will remain with the medical doctor to whom he rightfully belongs. To do so, the physician must accept the patient as a whole, total, functioning individual with both physical and mental make-ups, a disturbance of either, or a combination of both, resulting in an illness which can be relieved either by medical therapy, psychotherapy, or a combination of both.

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INFECTIVITY OF SPINAL FLUID IN LYMPHOGRANULOMA INGUINALE

On the basis of their own clinical and experimental observations and of data available in the literature, Emmerich von Haam and Rigney D'Aunoy, New Orleans (*Journal A. M. A.*, May 9, 1936), conclude that there is much evidence at least suggestive of frequent generalized dissemination of the virus during the early stages of the disease. Coutts takes a similar point of view and even goes so far as to divide the disease into three distinct periods or stages similar to those noted during the evolution of syphilis. According to him, the time elapsing between infection and the appearance of the primary lesion must be regarded as the primary incubation period and may extend up to three weeks. This is followed by a secondary period characterized by the appearance of constitutional symptoms, inguinal buboes and occasionally generalized lymphadenitis, skin lesions, conjunctival lesions and anemia. Lesions of the tertiary period are elephantiasis of the genital organs, ulceration of the vulva (esthiomene) and rectal stricture. Although the authors are inclined to consider the conclusions of Coutts premature on the basis of the available clinical observations on the various manifestations of the disease, they cannot deny that such a concept may yet prove correct. Their successful demonstration of the virus in the spinal fluid of infected patients certainly proves that dissemination of the virus in the human body actually occurs. Study of the spinal fluid in a large number of cases alone will prove whether this reported observation must be regarded as the rule or as an exception during the course of the disease. Even should the latter prove true, the observations give a firmer basis to the incrimination of the virus as the causal agent of the cerebral manifestations occurring during the course of inguinal lymphogranuloma, as described in increasing frequency by continental workers.

SOME COMMENTS UPON THE PRESENT DAY PRACTICE OF RHINOLARYNGOLOGY, BASED ON FORTY-TWO YEARS OF EXPERIENCE

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I WISH the word nasal catarrh could be banished from medical terminology. It is a term too frequently used by the laity. This is most unfortunate because two-thirds of such people never have this condition. Because one blows some secretion from one's nose, or has some dripping into the nasopharynx, by no means signifies that one is a sufferer from the condition connoted by the unfortunate word catarrh. Various pathologic lesions in the nasal cavities will produce these symptoms, but when the word catarrh is used, it signifies, in the minds of most people, a foul smelling discharge, which only occurs in a very limited number of cases. Let us avoid this word and speak of nasal conditions more because of their symptomatic and clinical significance and discourage the use of the euphonious word catarrh.

In my forty-two years of practice, the management of nasal diseases has made but few changes and these mostly from a conservative standpoint and in the refinement of surgical technique.

The Septum

In the beginning of my rhinolaryngological practice, there was a great furor as to the best method of straightening the nasal septum. That the septum plays a prominent part in the ventilation of the sinuses and middle ear is a well recognized fact. Just when a nasal septum needs to be operated upon is by no means a settled question, especially with respect to the attempt to make this organ conform to anatomical perfection.

For many years septum deviations were corrected by cutting through the cartilaginous portion of this organ, straightening the then movable parts of the septum with forceps, and inserting nasal splints to hold the parts in position. Later, Dr. Morris Asch devised a cutting forcep to accomplish the same purpose and for many years, after 1892, this was a well recognized procedure. All of these operations were only applicable to the anterior cartilaginous portion of the septum and had no effect upon the posterior bony part of the same structure. For this latter reason, there was developed the so-called submucous resection operation, which was brought to an almost perfect surgical technique by my old friend, Dr. Otto Freer of Chicago. This now constitutes the recognized operation for this condition with modifications in its technique.

Some twenty-five years ago, the submucous resection operation was frequently performed for the most trivial deviation. When necessary, the results of this operation have proven most beneficial to patients. But the cases must be carefully selected. Time and experience have taught us that slight deviations should not be subjected to this operation, as the final results are sometimes more annoying to patients than the original deviation. The speaker knows of no operation in rhinolaryngology which requires more dexterity in its performance.

The Turbinate Bodies

As we all know, the turbinates play an important rôle in the comfort of the patient by warming and moistening the atmosphere we breathe and by giving us a freedom of air ventilation when they are not enlarged or congested. In the early years of the writer's practice, there was a great enthusiasm for removing the inferior turbinate whenever there was marked stenosis of the nasal cavity. This was especially the case before the introduction of the submucous operation on the septum. An instrument known as the spoke-shave was used, which was nothing more than a ring curet with the cutting edge on the inside, by which the posterior end of the turbinate could be engaged, and with a forward pull the tur-

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binate could be entirely removed.

Scissors and biting forceps were later substituted for the spoke-shave so that the amount removed could be limited. Still later, however, it was discovered that while the patient would have decidedly more air space, there was a marked feeling of discomfort due to the scabby condition at the seat of operation and also due to the fact that the inspired air lacked the warmth and moisture engendered by the erectile tissue of the turbinates. Hence partial removal in selected cases superseded these radical procedures. The removal, however, of the middle turbinate is a well recognized procedure when there is a blocking of the ethmoidal cells and frontal sinus.

Allergy

In the early years of my practice, nothing was known of that systemic condition denominated as allergy. In following these cases of nasal stenosis, I was convinced, in my own mind, that there was some obscure systemic condition which existed at the bottom of the nasal symptoms. "Toxic condition" was a term frequently used, but even this term did not carry the importance which the term allergy implies to-day. We know now that the turbinates, in fact the whole lining membrane of the nasal cavities, may be greatly swollen through this mysterious allergic reaction peculiar to the individual. Hence it is entirely unsurgical in many of these cases to remove or operate upon the turbinates when this condition can be remedied by more conservative measures. In fact, much of our nasal pathology has been found to be closely related to allergic reactions, and for this reason, surgical operations are much less frequent to-day than they were twenty years ago.

Nasal Sinus Disease

The word sinus disease has almost reached the stage of obsession. The public has become so imbued with notions as to the prevalence and importance of nasal sinus disease that a sensation of fear passes through these individuals whenever there is a pain about the head. The importance of this condition must not be underestimated, but the fact must be borne in mind that a diagnosis of nasal sinusitis is not always easy to make. Too many rhinolaryngologists depend upon the x-ray as a final criterion. That this diagnostic procedure is a distinct aid in some cases must be admitted by every rhinolaryngologist, but to assume that it is absolute in its findings would lead many of us into error.

Dr. Shambaugh, of Chicago, in a recent comment, has expressed very forcibly the ideas of the majority of men who have had a large clinical experience. I shall take the liberty of quoting him, verbatim: "Roentgenograms properly made are a valuable adjunct in the diagnosis of sinus disease. It does not occupy the all-important position in making a diagnosis, however. In the first place, using any technic does not assure satisfactory results. Most of the skiagraphs brought in by patients are unsatisfactory and are not an aid in making a diagnosis. Certain of the sinuses lend themselves more readily to skiagraphy than do others. The rhinologist gets important assistance in skiagraphs of the frontal sinuses. They give one the size and the depth, important facts to have in mind if one is contemplating operative interference; also skiagraphs of the frontal sinuses give one very definite data regarding the contents of the sinuses. The same holds true of the maxillaries. Skiagraphy of the ethmoids and of the sphenoid sinuses is much less definite than of the frontal and maxillary sinuses and, in the case of the ethmoid and sphenoid sinuses, a much more accurate conclusion can be obtained by other methods. The surgeon who relies for his diagnosis entirely upon skiagraphy is going to meet with a great deal of grief if he undertakes surgical relief."

In other words, experience and clinical observation are much more reliable than x-ray plates. The frequent sending of patients to the roentgenologist for a final diagnosis of sinus involvement is certainly not always necessary in the light of the uncertainty of these skiagraphs.

What has been said above in reference to the nasal sinuses is equally applicable to skiagraphs of the mastoid. The writer considers that skiagraphs of the mastoid are usually unnecessary in making a diagnosis of mastoid involvement. Any middle ear which has had purulent discharge for over two weeks, with severe pain and some rise in temperature and with practically no diminution in the discharge in acute cases, or for years in chronic cases, will always show an involvement of the mastoid. Consequently, x-ray plates only show us what our clinical knowledge has already demonstrated. The question of operation in such cases must depend upon other clinical symp-

toms and not upon the x-ray. If all mastoids were operated upon because the skiagraphs showed them to be involved, the otologist would be operating upon nearly every case of middle ear involvement. The younger men in our profession should be taught not to put too much confidence in x-ray skiagrams.

Just at this point, the writer wishes to call attention to the frequent prevalence in the consultation room of patients who imagine that they are suffering from some mastoid disease. Most frequently pain around the ear is referable either to some acute tonsillar infection or more often is ascribable to a reflex from bad teeth. If people could be taught that mastoid disease never occurs unless there has been a previous discharge from the middle ear, there would be less fear about these occasional pains.

The question of sinus disease as the focal point of infection for many systemic diseases will always need careful consideration. As a causative factor, sinus involvement cannot always be placed in the same category as the tonsils, teeth, gallbladder and prostate gland. The absorption of infected material through the lymphatic drainage depends upon its close relationship to the parts involved. The fact that the submaxillary glands enlarge when the tonsils and teeth are infected shows how easy it is for the infection to travel along the lymphatics. In sinus involvement, there is no close relationship and the writer's experience does not justify him in regarding such involvement as a causative factor in so-called focal infection in but a limited number of cases.

Lymphoid Tissue in the Pharynx and Nasopharynx

This subject resolves itself into a discussion of adenoids and of faucial and lingual tonsils. It is a subject for unlimited discussion and I shall only give some of my clinical observations on certain points which have been rarely considered. The final word has not yet been spoken in reference to the medical and surgical treatment of these lymphoid structures. The writer has been firmly convinced for many years of the importance of this tissue in its relationship to the human economy. He is also convinced that a more thorough preliminary and postoperative treatment of these cases should be instituted. My experience shows me that there is a close relationship between this lymphoid tissue and the functional activity of the endocrines.

Whether or not the tonsil is an endocrine organ is a question which has not as yet been answered with certainty. Peller of Vienna, in the *Monatschr. f. Ohrenh.*, 1934, is firmly convinced after a thorough study of 3,200 cases that the question can be absolutely answered in the affirmative. Physicians and patients often wonder why, after a supposedly thorough removal of tonsils and adenoids, there is a return in a few years of this same tissue in the back part of the pharynx, even frequently extending into the nasopharynx. This occurs in the practice of the most skilled operators. Years ago, the writer had a patient whose "tonsils" had been removed three times. This, of course, is an exceptional case, but it actually occurred. All laryngologists are familiar with the experience of having patients develop a large amount of lymphoid tissue in the pharynx after the removal of tonsils. Compensation in the human body is a well recognized fact. If one is completely blind, there is a compensatory development in one's hearing and tactile sense. If one is deaf, there is a compensatory development in one's eyes, as, for instance, in lip reading, and so is it true in other portions of the body. As a further instance, Dr. Abel, of John Hopkins University, has shown that when one adrenal gland is removed, there is a compensatory enlargement of the other gland. The interrelationship of the hormones of the various endocrine bodies is now a well recognized fact. So that when the tonsils have been removed here is a compensatory development in the form of islands of lymphoid tissue in the pharynx and especially along its lateral walls. Consequently, many patients have almost as much trouble after the removal of tonsils as they did before, but with a different kind of inflammatory process. Such individuals are apt to suffer with a nasopharyngitis or a laryngitis, having been deprived of the protection afforded by the tonsils. The writer believes that much of this ill effect could be avoided if the patients were thoroughly iodinized before and after the operation. The relief of this condition, when it does occur, besides the administration of iodine, often calls for x-ray therapy. Some years ago, this latter treatment was advised for the reduction of large tonsils, but it has been largely abandoned. In compensatory outgrowths of lymphoid tissue in the pharynx and nasopharynx, after tonsillectomy and adenoidectomy, this treatment by x-ray has been reported by many rhinologists as giving most excellent

results. In addition to this, I think it very advisable for endocrine tests to be made before the removal of tonsils in children, as it has been repeatedly shown that there is a close relationship between the thyroid gland and this lymphoid tissue in the throat. The removal of tonsils has too often been considered a simple operation, but the after results have not been duly considered.

There are many other conditions in the field of rhinolaryngology which the writer would like to consider and in this way call attention to the fallacy of routine treatment, but my space is limited. If I can get the specialist to work more intimately with the internist, I shall feel that something has been accomplished in calling attention to some of these everyday problems.

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THE PROBLEM OF THE SPASTIC CHILD WITH CLINICAL SUMMARY OF ONE THOUSAND CASES

ALVIA BROCKWAY, Los Angeles (*Journal A. M. A.*, May 9, 1936), presents a statistical study of 1,000 cases of cerebral birth hemorrhage treated at the Orthopaedic Hospital during the last twelve years. If the maximal end results are to be obtained, cooperation between the orthopedic surgeon, the medical consultant, the dentist, the psychologist and the neurosurgeon is imperative. Intensive training by the physical therapy and occupational therapy departments is justly rewarded, provided the child is of from fair to normal intelligence. The primary aim is to teach relaxation. With the spastic child, even a simple motor act such as reaching for a toy may be a major undertaking. Since certain contractures are apt to occur, exercise can be designed that will tend to overcome these overactive muscles. In the occupational therapy department it is possible to give greater latitude to the child's preferences, carrying with it the appeal of achievement, an urge to create and the praise that goes with a piece of work well done. That speech training is a very necessary part of the training is indicated by the fact that even normal children with speech defects are apt to develop peculiarities of personality and unsocial tendencies. It is unfortunate that so many men feel that surgery and bracing play such a small part in the rehabilitation of the spastic child. That it must be an important part of the problem is indicated by the fact that, in the present series of 1,000 cases, 542 surgical operations were performed, in 38 per cent braces of some sort were worn during part of the treatment, and shoe corrections without braces were worn in 28 per cent of the cases. It is a common experience in this institution for the physical therapy department to comment on the better results that exist after contractures and overactive muscles are improved through surgery and bracing. The uphill battle has been made lighter and the patient makes faster progress in balance and walking. Braces help to stretch the overactive muscles continuously and minimize the number of joints that are brought into play when walking, so that the child just beginning to take steps can focus his attention on fewer moving parts. They cut down on the number and degree of excursion of vicarious, incoordinated motions when a voluntary act is attempted. Even after surgical procedures such as neurectomies and operations to lengthen short tendons, the overactive muscles will again bring about the original contracture if they are not kept stretched for a long period in braces. Of the 542 operations 457 were performed on the lower extremities. This preponderance of surgery on the legs and feet is accounted for in part by the fact that the lower extremities are more frequently involved, but chiefly it is due to the fact that the surgeon is more concerned, and rightly so, with making a bedridden or wheel-chair patient walk than he is with increasing function of the arms and hands. Transplants of spastic muscles are in general disappointing. Tenotomies and plastic lengthening of tendons are usually more satisfactory than neurectomies. Little or nothing has been accomplished by ramisectomies. The flexion contracture of the hand and fingers yields to continuous stretching in plaster splints and, if accompanied and followed by training, the function of the hand can be greatly improved. Tenotomies of the adductor muscle of the thigh and neurectomy of the obturator nerves for overactive adductors and scissor gait have stood the test of time. Overcoming the flexion contracture of the knees, in the milder cases by wedging casts and in the severer cases by capsulotomies, will always be a valuable measure, and it enhances the training possibilities. To improve balance, lengthening of short heel cords followed by bracing is always good surgery.

Clinical Notes

TREATMENT OF VAGINAL INFECTIONS WITH ACTIVATED KAOLIN IN COMBINATION WITH ACETYLAMINOHYDROXYPHENYLARSONIC ACID

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THIS is a report on the treatment of sixty-three typical cases of vaginal infection met with in everyday practice.

The treatment was with a new combination of drugs in the form of tablets composed of activated kaolin, 13 gr., acetylaminohydroxyphenlyarsonic acid, 7/10 gr., and salicylic acid, 3/10 gr.

The principle behind this combination is to trap the bacteria by means of the powerful absorbent action of the activated kaolin (kaolin coated with alumina gel), and then to destroy them with the arsenical. The tablets act in an alkaline, acid or neutral medium, and were found very effective in cleansing the vagina of purulent discharge and relieving irritation.

There is much in the recent literature about *Trichomonas vaginalis* and its treatment. Many practitioners, however, say they very rarely see cases of it. In the writer's opinion, this is because the trichomonads which may have been in the smear are usually dead by the time the smear is examined by the pathologist—and when dead they cannot be distinguished from pus cells. It is my opinion that probably forty per cent. of the cases of vaginal disorder encountered by the general practitioner are due to *Trichomonas vaginalis*—this based upon my own clinical experiences and the reports of numerous clinics. The combination of drugs mentioned above, used in this series of cases, promptly relieved the irritation, and in all but one case cured the leukorrhea due to *Trichomonas vaginalis*.

In all infections where the diseased area is accessible, gratifying results were obtained. Vaginitis, cervical erosions, cervicitis and endocervicitis, thrush infection, pruritis vulvae and even gonorrhea responded to this treatment. It should be noted that the sole effect in two cases of gonorrhea was to diminish the purulent discharge, consequently relieving the irritation to a large degree, and aiding in carrying on the curative treatment.

As a preparation for vaginal operations, after cauterization or copperionization treatment, as a preparation for childbirth and in postpartum treatment, this combination of activated kaolin with acetylaminohydroxyphenylarsonic acid seems to be ideal.

At first four tablets were used. But it was found after thorough trial that one tablet gave the desired results, and we have established this as routine procedure: moisten one tablet in water and insert in the posterior fornix of the vagina—as far back as possible. Repeat every other day for a period of two to three weeks. In some stubborn cases a second series of treatments was found necessary after a rest period of ten days to two weeks. In those cases where it is impracticable for one reason or another for the patient to make such frequent of-

tice visits, she can readily be shown how to insert the tablets, and can use the treatment at home, coming in several times for a check-up.

It may rightly be argued that most of the treatments now in use, in conjunction with eliminating deep-seated causes, would clear up vaginal infections, but this method clears up a great many that other measures failed to help, it gives results in less time, it is very simple, and it causes a minimum of annoyance to the patient — no irritation, no tampons, no staining.

The following cases are illustrative of the condition treated:

Case 1. History — 21 years old. Cesarean section, placenta previa. Menses at 13 years.
Examination — Uterus adherent posterior. Cervix small, eroded. Vagina inflamed.
Diagnosis—Cervicitis, retroversion, adherent, vaginitis.
Treatment—Copperionization. Four tablets every other day. Cervicitis and vaginitis cured in three weeks.

Case 2. History — 28 years old. Ulcers of vagina four years.
Examination — Small ulcers of vagina. Alkaline. Smears showed numerous saccharomyces hyphae and *Oidium albicans* in vagina and vulva.
Diagnosis — Thrush infection of vagina and vulva.
Treatment — Four tablets every other day. Cured and discharged after three weeks.

Case 3. History—42 years old. No child. Menopause symptoms. Last menses 1 year ago. Profuse vaginal discharge for over one year.
Examination — Vagina inflamed, cervix not eroded. Smears showed colon bacilli and *Bacillus fecalis*, and no trichomonads.
Diagnosis—Vaginitis, menopause.
Treatment—One tablet every other day gave relief and stopped the discharge.

Case 4. History—37 years old. Two children. Pain in back, burning and itching in vagina. Profuse discharge.
Examination — Cervix not eroded. Retroversion. Adherent. Vagina and vulva inflamed.
Diagnosis—Vaginitis with pruritis vulvae. Retroversion. Adherent.
Treatment—One tablet every other day reduced discharge and relieved itching.

Case 5. History—39 years old. Menses at 11 years. Two children.
Leukorrhea since last baby. No pain.
Examination—Scar at tip of coccyx due to abscess. Cervix eroded, lacerated. Vagina inflamed.
Diagnosis—Cervicitis, vaginitis.
Treatment—Copperionization. One tablet every other day.
Discharge relieved after one course of treatments. Stopped after second course.

Case 6. History—30 years old. Menses at 12 years. Regular. Last menses two months ago. Pain in back. Leukorrhea. Constipated.
Examination — Vagina reddened, inflamed. Smears show trichomonads. Uterus enlarged.
Diagnosis—Pregnant. *Trichomonas vaginalis.*
Treatment — Two tablets every other day for two weeks relieved discharge.

Case 7. History—39 years old. No child. No miscarriage. Menses at 12 years. Last menses flowed two weeks. Profuse discharge and burning of vagina.
Examination — Uterus enlarged, retroverted. Cervix swollen, eroded. Vagina inflamed.
Diagnosis — Cervicitis. Retroversion. Metritis. Vaginitis. Gonorrhea.
Treatment—One tablet every other day for three weeks, and then another course, relieved the burning and purulent discharge, aiding in the treatment of the gonorrhea and affording the patient comfort.

Case 8. History—45 years old. Child 6 years old. Three miscarriages. Wassermann negative. Leukorrhea 6 years.
Examination—Cervix eroded, enlarged. Tender both sides.
Uterus retroverted.
Diagnosis—Cervicitis. Salpingitis.
Treatment—One tablet every other day gave relief and stopped leukorrhea in three weeks.

Conclusions

1. Chronic vaginal infections are ex-

tremely resistant to treatment.

2. This combination of activated kaolin and an arsenical is a powerful adsorbent and antiseptic which is non-irritating and can be used with a minimum of disturbance to the patient.

3. Many of the cases reported were treated by other methods without results before this treatment was instituted.

4. This combination of drugs will relieve, and in many cases cure, stubborn vaginal infections and irritations, and it is ideal as an adjuvant where other methods must be employed to eliminate the cause of vaginal symptoms.

57 WEST 57TH STREET.

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RESULTS OF THE INJECTION TREATMENT OF HERNIA IN FOURTEEN CASES

CHARLES E. WARD, M.D., Cleveland, Ohio

The following histories are of the cases presented before the Industrial Branch of the Academy of Medicine of Cleveland on November 1st., 1935.

Owing to the time required to show the cases, I did not discuss the treatment of hernia by the Injection Method, believing that the results obtained by this method of treatment were of more interest.

I believe that this is the first time the subject of the Injection Treatment of Hernia has been presented in Cleveland and also the first time we have had a public showing of cases treated and cured without operation.

The ages of the cases shown varied from 13 months to 75 years. They included indirect, direct, postoperative recurrent, bilateral and femoral hernias. Several of the indirect hernias were of the large scrotal type.

1. Case of L. A. . .age 13 months.
   The first case I am presenting for your consideration is also the youngest patient whom I have treated by the injection method. This child had a right indirect scrotal hernia. He was properly fitted with a truss after which eight injections (small) were given. I found it necessary and advisable to administer a few whiffs of ether as it is very difficult to control a child of that age. The first treatment was given on June 6th, 1935 and the truss was removed on October 25th, no evidence of hernia remaining.
2. Case of R. E. . . age 4 years . . . referred by Dr. H.
   This patient had a right inguinal scrotal hernia which had been present since the age of 6 months. The first treatment was given July 19th, 1935 and the last August 8th, 1935. It was found inadvisable to attempt to use a local anesthesia infiltration owing to the rather restless condition of the child; however, with slight restraint, he was easily controlled and six treatments were given. A properly fitted truss was applied and worn until October 28th, when the truss was removed and the inguinal rings found closed.
3. Case of John B. . . age 28 years . . . referred by Dr. Y.
   Patient has a right indirect scrotal hernia. First treatment given March 12th, 1935 and the last April 15th, 1935. Fourteen treatments in all. He was properly fitted with a truss which he wore for a period of four months after which the truss was discarded and a cure effected.
4. Case of Bernard B. . . age 75 years . . . referred by Dr. W.
   Patient had bilateral direct inguinal hernias. First noted in 1900. This patient was rather emaciated and had worn a truss more or less of the time. Unfortunately the truss did not retain the hernias. He was fitted with a truss which held the ruptures and the left or larger hernia was first injected on October 21st, 1935 and he has had five injections to

Case Presentations at the meeting of the Industrial Branch of the Academy of Medicine at Lutheran Hospital, Cleveland, Ohio, November 1, 1935.

this date. At this time you can readily see by placing him in an upright position how the right side protrudes and the left remains in position. It is my opinion that it will require ten more injections on the left side to effect a cure, after which the right side will be treated.

5. Case of J.A.D. . . . age 57 years. . . referred by Dr. K.
Acute right indirect inguinal hernia. While working in his factory, patient felt a sharp pain in the right side and at once noticed a swelling. Nothing was done about it for a few days when the protuberance increased in size and slipped into the scrotum. Upon examination a right indirect inguinal hernia was found. A properly fitted truss was applied and the first treatment was given on September 17th, 1935, and the last on October 16th, 1935. Patient worked at his regular occupation during treatment and, on October 25th, abdominal wall was firm with no impulse upon coughing.

6. Case of V. F. . . age 72 years . . . referred by Dr. W.
Right indirect inguinal hernia reaching into the scrotum. Patient had been refused surgical relief. He is afflicted with paralysis agitans. A properly fitted truss was applied. First treatment April 3rd, 1935 and last May 21st, 1935. Twelve treatments in all. Patient wore truss for ninety days following completion of treatments, after which it was discarded. Internal and external rings closed.

7. Case of P. F. C. . . age 68 years. . . referred by Dr. F.
Right indirect inguinoscrotal hernia. . . seven years duration. Patient fitted with a truss. First treatment September 17th, 1935 and last October 21st, 1935. . . 14 treatments in all. Two extra treatments were given in this case as he had had a previous prostatectomy and considerable weakness was found around Gimbernat's ligament. Internal and external rings closed.

8. Case of C.W.H. . . . age 34 years. . .referred by Dr. W.
Left indirect inguinal hernia reaching into the scrotum. Patient has worn a truss for nine years. First treatment September 27th, 1935 and last October 30th, 1935. . . . twelve treatments given. Abdominal wall firm and no evidence of impulse upon coughing. Internal and external rings closed.

9. Case of Dr. G. W. K. . . age 45 years . . . Left indirect inguinal hernia into scrotum. Nine years duration. Patient very nervous. First treatment March 27th, 1935 and last May 1st, 1935. Twelve treatments given. Abdomen firm, no protuberance.
Internal and external rings closed.

10. Case of J. W. H. . . age 25 years . . .referred by Dr. W.
Acute right inguinal indirect hernia. Two years duration. Properly fitted truss applied. First treatment September 30th, 1935 and last October 30th, 1935. Twelve treatments given. Last examination showed that the abdominal wall was firm with closure of both external and internal rings. No impulse upon coughing or protuberance upon standing. Patient instructed to wear truss for ninety days.

11. Case of R.G.M. . .age 35 years. . . referred by Dr. Y.
Recurrent right indirect inguinal hernia. Patient had had two herniorraphies, the last one in October, 1934. Recurrence noted about sixty days after last operation. Patient had become more or less melancholy and was with difficulty convinced that the injection treatment might cure him. First treatment April 19th, 1935 and last May 17th, 1935. May 12th, abdominal wall was found to be firm with no recurrence. October 21st., no recurrence and patient advised to discard truss. No impulse upon coughing and internal and external rings closed.

12. Case of Thos. S. . . age 50 years. . . referred by Dr. K.
Right indirect inguinal hernia of one year duration. First treatment September 3rd, 1935 and last October 14th, 1935. Twelve treatments given. October 28th, 1935, abdominal wall firm with no protuberance or impulse upon coughing. Internal and external rings closed.

13. Case of Dr. S. . . . age 64 years.
Right indirect inguinal hernia of 13 months duration. First treatment September 3rd, 1935 and last October 14th, 1935. Twelve treatments. October 23rd, 1935, abdominal wall firm, no protuberance upon coughing. Internal and external rings closed.

14. Case of R. W. . . . age 74 years.
Right femoral hernia. Patient first seen at home with an acute strangulated right femoral hernia. Pain and vomiting.

—Concluded on page 368

Cancer

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THE ENDOCRINE RELATIONS OF CANCER

III—THE THYROID BODY

PRIMARY carcinoma of the thyroid body, like carcinoma of the adrenal bodies, is not numerically great in mortality statistics; in fact there is no individual title for these growths in the tables published either by the Bureau of the Census or by the Division of Vital Statistics of the Health Department of the State of New York.

In this review we have brought together opinions based on 1449 cases.

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Mulvihill (4) compares the frequency of primary carcinoma of the thyroid body as seen in the Long Island College Hospital between 1920 and 1932 and in Sauerbruch's clinic in Berlin between 1928 and 1934. In the former thirty-two cases of carcinoma of the thyroid, "malignant struma," were seen in the twelve year period. In the latter twenty-nine cases were seen in six years. In the former the cases were often not recognized until microscopic examination was made; in the latter the cases were recognizable clinically. He points out that on histologic examination of material from thyroidectomies it is seen that an apparent adenoma breaks through its capsule early or grows into the blood vessels. By prompt surgery in the case of thyroid nodules the development of carcinoma is avoided.

Smith, Pool and Olcott (1) classify the growths as (1) papillary type of adenocarcinoma; (2) fetal type of adenocarcinoma; (3) epidermoid type of carcinoma; (4) giant cell type of carcinoma; (a) polyhedral cell type; (b) spindle cell type; (5) small round cell type, (a) compact; (b) diffuse; and (6) sarcoma.

Clute and Warren (36) have studied 226 cases of thyroid cancer seen in the Lahey Clinic prior to 1932. They divide thyroid cancer into three clinical groups: (1) Cases with low potential malignancy. Histologically (a) adenomata with blood vessel invasion; (b) malignant papillary adenocystomata. These growths are highly radiosensitive. There were 150 such cases in the series. Of these 7.0 percent had recurrences at the time of writing or had died of thyroid cancer. No death or recurrence occurred in this group in any patient free from trouble at the end of one year after the operation. (2) Cases which have definite but not hopeless malignancy. Histologically these growths are adenocarcinomata, (a) papillary; (b) nonpapillary or alveolar. These cases may show considerable regression with X-irradiation. Thirty-one cases fell into this group and 68.0 percent were living with recurrence or had died of cancer. (3) Cases in which there is severe and usually incurable malignancy. Histologically these cases are (a) squamous cell or epidermoid carcinoma; (b) carcinoma simplex or small cell carcinoma; (c) giant cell carcinoma, often called carcinosarcoma; (d) fibrosarcoma. These tumors are radioresistant. There were forty-five cases in this group and 86.0 percent of the patients were living with recurrences or had died of cancer.

Two hundred and eleven of the patients had been followed, or 93.0 percent of the 226 cases studied. Of these 30.9 percent were living with recurrence or had died and 69.1 percent were alive and well three years or longer.

Broders and Pemberton (2) report a case

of primary osteogenic sarcoma of the thyroid body in a man, aged 71 years. They believe the growth originated in the stroma of the organ by differentiation or anaplasia of fibroblasts.

Dinsmore and Hicken (3) divide the malignant tumors of the thyroid body into lymphosarcomata, spindle cell sarcomata, carcinosarcomata, adenocarcinomata, papillary carcinomata, and malignant adenomata. They are of the opinion that the term "benign metastasizing adenoma" is "misleading and should be abandoned."

Pemberton (6) says the teaching that benign thyroid tumors are capable of metastasizing is a fallacy.

Levi and Hankins (5) report a case of carcinoma in thyroid tissue in the tongue.

The *symptoms* of thyroid disturbance are too well known to be reproduced here. Smith, Pool and Olcott (1) point out that the clinical diagnosis of cancer of the thyroid body is more difficult than the pathological diagnosis. In early cases, especially in those that originate from preexisting adenomata, there are no clinical features to suggest the malignant nature of the disease and by the time a clinical diagnosis can be made the growth has invaded the capsule and is far advanced. The patient's attention is attracted to the thyroid body by increase in the size of an existing goiter.

Pemberton (6) reports 658 cases of carcinoma of the thyroid body seen at the Mayo Clinic during the twenty-five years between 1910 and 1934. In 406 of these the diagnosis was made from histologic study. These tumors originated in preexisting goiters in 87.0 percent of the cases in this series. There are no signs or symptoms by which early malignant change can be recognized, because it is only after the carcinoma has perforated the capsule of the thyroid body and invaded the surrounding structures that a positive clinical diagnosis can be made. The estimation of the basal metabolic rate in a patient with a thyroid tumor throws no light on the diagnosis between a benign and a malignant tumor.

Shallow, Lemmon and Saleeby (7) report twenty-four cases of malignant neoplasms in 1096 cases of disease of the thyroid body seen in the Jefferson Medical College Hospital between 1923 and 1933; 2.18 percent.

Clute and Smith (8) report sixty-seven cases of carcinoma of the thyroid body. They found that an adenomatous goiter preceded the development of cancer in 94.4 percent of the cases and that the reduction of the mortality of thyroid carcinoma must depend on the removal of "premalignant adenomata."

Dunhill (9) is of the opinion that a nodule in the thyroid body should not be regarded as of no importance. Changes in the symptomatology should demand an investigation into the cause of these changes. In every case of removal of thyroid tissue, microscopic study of different areas should be made in the search for early malignancy.

Dinsmore (10) reports thirteen cases of carcinoma of the thyroid body. Shofner (11) is of the opinion that from 0.5 to 2.0 percent of all thyroid bodies removed contain sarcoma or carcinoma nodules and that 90.0 percent of these tumors are found in preexisting nodular goiters. There is a report of six cases. Tinker (12) reports twenty-two cases. In his experience slow growing, radiosensitive adenocarcinoma which does not tend to metastasize is the commonest form. D'Abreu (13) advocates the prophylactic excision of all thyroidadenomata as a preventive of thyroid carcinoma. He reports a case of carcinoma developing in a thyroid tumor which had been present for forty years. Clute (14) reports four cases in which unsuspected carcinomata were found in the material removed during operation for exophthalmic goiter. This change may occur in a thyroid body which is the seat of a primary hyperplasia. He is convinced of the prophylactic value of the removal of all thyroid adenomata.

Schreiner and Murphy (15) found that 0.37 percent of 11,212 cases of carcinomata and other malignant tumors examined at the New York State Institute for the Study of Malignant Disease in twenty years were thyroid carcinomata.

Smith, Pool and Olcott (1) report fifty-four cases of carcinoma and other malignant tumors of the thyroid body. These cases formed 2.5 percent of all surgical thyroid cases. In 92.6 percent of these fifty-four cases there was definite indication of the origin of the cancer from preexisting adenomata.

Lester (16) reports two cases; one in a woman, aged 41 years; the other in a man aged 21 years. Habermel (17) says that a large majority of cases of thyroid carcinomata occur in long standing nodular goiters. Molesworth (18) reports a case of sarcoma of the thyroid which developed in a calcified adenoma. The patient was a man, aged 59 years.

Metastasis: Thyroid carcinomata, like all other malignant tumors, tend to metastasize.

Dinsmore and Hicken (3) have studied 264 cases of carcinoma of the thyroid body from the viewpoint of metastasis which occurred in 124 cases, a little less than 47.0 per cent. Wirth (19) reports a case in which metastases were found in the lungs, the right ventricle and both kidneys.

McClellan (20) reports the case of a man, aged 60 years, who had had a very large thyroid tumor for twenty years. A biopsy was done under a local anesthetic and the histologic report was "thyroid adenoma." Two weeks later the patient was readmitted to the hospital for paraplegia following a "cold." He was dyspneic, complained of dysphagia, loss of strength, tingling and edema of both legs and the tumor had regained its former size. The patient died and at autopsy metastases were found in the lungs, the pleurae, the peribronchial lymphnodes, and the skeletal system.

Pemberton (6) points out that carcinomatous cervical lymphnodes may develop "months or years following the removal of a malignant tumor of the thyroid." He also refers to metastases in the skeletal system and in the lungs. According to Dinsmore and Hicken (3) the lungs are most frequently the seat of metastases from primary thyroid carcinoma. Metastatic growths are also found in the skeletal system, the cervical and the axillary lymphnodes, the brain, the liver, the abdominal organs, and the "soft tissues." Holt (21) reports the case of a man, aged 72 years, in which tumor thrombi invaded the superior vena cava and extended into the right auricle. Four other cases were found in the literature. Shallow, Lemmon, and Saleeby (7) report metastases to the lungs, the skeletal system, the kidneys, the liver, the stomach, and the mediastinum in seven of their twenty-four cases; 29.1 percent. They are of the opinion that metastasis of these growths occurs relatively late.

The metastases contain thyroxin as two biological analyses reported by Engelstad (22) have shown. Both of the patients were women. One had had a goiter for twenty years and came under observation for a tumor at the "back of the head" which was reported to be a metastatic thyroid adenocarcinoma. The other, aged 64 years, had had a goiter "from youth." This patient had a tumor on the back of the right thigh, the size of a "baby's head." This tumor was reported to be a "very atypical malignant tumor, either a sarcoma or a metastasis from an endocrine gland." The thyroxin content of the growth showed its real character.

In a former communication Engelstad (29) reported that he found active thyroid colloid equivalent to 0.25 mg. of sodium thyroxin per gram of tumor in a metastatic thyroid carcinoma of the skull in a patient aged 82 years. We interpret this to indicate that the cells of the metastatic tumor possessed the same metabolic characters as the cells of the thyroid body from which they were derived.

The thyroid body is sometimes the seat of metastasis from primary tumors elsewhere. Rice (23) reports nine such cases, in four of which the metastases were microscopic. Willis (24) has collected forty-seven cases of metastatic tumors in the thyroid body from the literature and has added ten others from his own experience. He is of the opinion that the thyroid body should be examined for metastases in every case of malignant disease. Carcinoma of the lung and melanoma are particularly likely to give rise to such metastases, which are frequently found in preexisting abnormalities. Potter and Ross (25) report five cases of carcinoma of the thyroid body in boys and girls aged 14, 15, 18, and 19 years.

The Influence of the Injection of Thyroid Body Extracts and of Thyroxin in Animals with Malignant Tumors:

Samuels and Ball (26) selected young male rats which were subjected to the removal of the pituitary body. Three weeks later these animals were subjected to grafting of the mammary carcinoma of Walker. Thirty-four of these rats were given one-sixth grain of thyroid substance twice weekly. Only 6.0 percent of the grafts took. On the other hand, in forty control animals 38.0 percent of the grafts took. However, the difference in tumor growth rate in normal and hypophysectomized animals occurred both with and without thyroid feeding and to the same degree. The sex of the animal had no bearing on the behavior of the tumors.

Sugiura and Benedict (27) found no curative or retarding influence exerted by thyroxin when injected subcutaneously or intramuscularly into animals in which grafts of the Flexner-Jobling rat carcinoma, Jensen rat sarcoma, Sugiura rat sarcoma, Bashford mouse carcinoma, No. 63, Twort mouse carcinoma, Gye mouse sar-

coma, No. 37, a transplanted mouse melanoma and Rous chicken sarcoma No. 1, were growing.

Meyer and McTiernan (28) found that the influence of the administration of hormones to mice with transplanted tumors is insignificant except for thyroxin and insulin. Thyroxin appreciably inhibited the oxygen consumption of sarcoma No. 180 and carcinoma No. 63. Microscopically, the sarcomata in thyrotoxic mice resembled the tumors growing in mice without thyrotoxicosis. Thyroidectomy appeared to bring about a depression of tumor metabolism; but this depression was not very striking. Thyroxin seemed to inhibit tumor growth. Thyroidectomy did not prevent the usual rapid growth of sarcoma.

Sugiura and Benedict (30) found that in all experimental animals fed on a goitrogenic diet, or on a diet containing added iodine, the rate of tumor growth was very slow. The percentage of tumor takes and tumor regressions was found to vary significantly with variations of the iodine content of the diets. The smallest number of takes and the greatest number of tumor regressions occurred in those animals receiving a normal amount of iodine. On the other hand, animals on either a high or a low iodine diet showed a high percentage of takes and a low percentage of regressions. Prolonged feeding of high iodine diets had no theurapeutic effect on the growth of the Flexner-Jobling rat carcinoma, on mouse sarcoma 180, or on the Passey mouse melanoma.

Bischoff, Long and Maxwell (31) found that thyroxin failed to effect tumor growth after experiments on mice weighing twenty grams.

The Effect of the Removal of the Thyroid Body on the Development of Experimental Tumors:

Reiss and Balint (32) found that after thyroidectomy the Jensen sarcoma did not take or that the takes were poor. They thought that this result was due to the hypothyroidism induced in the animals by the thyroidectomy.

Karnicki (33) in a study of the influence of the endocrine system on sarcoma in rabbits found that removal of the thyroid and of the accessory thyroid increased the development of the growths. He also found (34) that thyroidectomy with unilateral parathyroidectomy hastened the formation of cancer in the relation of three to one.

Levine and Kugel (35) studied the behavior of mouse tumor 180 when implanted in thyroidectomized mice. More than 300 thyroid injured mice and controls were studied for a year. Measurements showed that the average size of the grafted tumors was smaller in the thyroid injured animals than in the control animals.

SUMMARY

Cancer, using the word to include all malignant tumors, is fairly frequently met with in the thyroid body. The majority of observers believe the tumors originate in previously existing benign growths and that prompt surgical removal of thyroid nodules will prevent the development of cancer.

The injection of thyroid substance or thyroxin in experimental animals apparently has some influence on the takes and the growth of transplanted tumors. One observer reported a lessened number of takes; one reported an inhibition of tumor growth; and two reported no curative or retarding influence. One observer found that thyroxin inhibited the oxygen consumption of a sarcoma and of a carcinoma.

A goitrogenic diet or a diet containing added iodine was followed by "very slow" growth. The smallest number of takes and the greatest number of tumor regressions occurred in animals receiving a normal amount of iodine.

Thyroidectomy diminished the number of takes at the hands of Reiss and Balint and increased their development at the hands of Karnicki. However, the latter author also removed the parathyroids. Meyer and McTiernan found that thyroidectomy did not prevent the usual rapid growth of sarcoma. On the other hand, the tumor metabolism was depressed. At the hands of Levine and Kugel grafted tumors were smaller in thyroidectomized animals than similar tumors in the controls.

It looks as though further study of the thyroid might produce some additional valuable information.

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Clinical Notes

RESULTS OF THE INJECTION TREATMENT OF HERNIA IN FOURTEEN CASES

(Continued from page 363)

Hernia reduced with difficulty and patient fitted with a truss which held the hernia in place. First treatment September 25th, 1935 and last October 16th, 1935. Nine treatments in all. Femoral ring closed.

ARTIFICIAL FEVER IN TREATMENT OF GONORRHEAL OPHTHALMIA

As fever treatment of gonorrheal infections in various parts of the body is beneficial and as the lethal death time of Neisseria gonorrhoeae at 41.5 C. (106.7 F.) varies between six and twenty-four hours, W. T. HASLER JR. and LOUIS SPEKTER, Durham, N. C. (*Journal A. M. A.*, July 11, 1936), treated six cases of gonorrheal ophthalmia with radiant energy. Treatments for five hours at 41.5 C. or lower (never higher) may be given instead of the twelve hourly period, which requires two or three shifts of nurses. However, more treatments will be required. During the first two or three hours of fever the conjunctival discharge diminishes rapidly in amount and the edema becomes less, allowing the irrigating solution to reach all parts of the conjunctiva. Toward the end of the treatment the changes have progressed, so that the cornea, which perhaps could not be seen well before treatment, because of chemosis, now can be more clearly observed. Irrigations may be continued with ease for the next few days. Gonococci, which still may be present, seem to be less resistant to antiseptics. Though irrigations may not be necessary, it is wiser to carry them out at intervals of four hours. If the infection is not eradicated by the first treatment, the inflammatory process may recur in two or three days, when a second treatment should be given. Of the six patients having gonorrheal ophthalmia the organisms disappeared after one or two treatments in five. In the sixth the gonococci disappeared one week following the second treatment.

TREATMENT OF EARLY SYPHILIS WITH ELECTROPYREXIA

CLARENCE A. NEYMANN, THEODORE K. LAWLESS and S. L. OSBORNE, Chicago (*Journal A.M.A.*, July 18, 1936), treated fourteen cases of early syphilis with hyperpyrexia. This therapy was combined with neoarsphenamine and bismuth salicylate in half of this number. The seven cases treated with hyperpyrexia alone developed further clinical or serologic signs of syphilis after treatment ceased. The seven cases treated with combined therapy became serologically negative and showed no clinical signs of syphilis for periods ranging between five and eighteen months. The average length of the treatment period necessary to obtain a negative serologic reaction can be materially shortened by using this combined therapy.

Economics

Department Edited by Thomas A. McGoldrick, M.D., LL.D.

THE FALLACY OF HEALTH INSURANCE

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THE present tendency of so-called sociologists in this country is to take up and experiment with what they term forms of social security which have been tried unsuccessfully in several countries.

When Bismarck originated social insurance fifty years ago in Germany his main ambition was to give the people something for nothing so that they would forget the woes of heavy tax burdens which were thrust upon them in building up his Empire. In this country the same sop to the unthinking, overburdened taxpayer is being tried. This experiment would not be so bad if Germany's effort had been successful, but on the contrary, that effort has proven a dismal failure, and would be instantly overthrown if it were possible, which is not the case either on the part of the Government or the people; for many of the poor unfortunates have been paying premiums into this fraudulent mess all of their lives when they might have been saving, and they are now aged paupers dependent upon the starvation pittance called old age insurance which is the only thing standing between them and complete destitution.

It may easily be proved that social insurance is not only caused by lack of means, but it aggravates and spreads this lack of means and makes it permanent, by taking away from men the instinct to hoard and save for times of need and thus accumulate the property and wealth upon which all culture and progress is founded.

From the standpoint of economics this egregiously wasteful governmental fiasco in Germany has been one of constantly rising costs. In 1913 the budget for social insurance was 1,300,000,000 marks; in 1930 it rose to 6,000,000,000 which did not include expenses of public welfare which were 4,800,000,000 marks more. On the other hand, since sickness insurance has been in effect the average number of days of incapacity from ill health has risen from 5½ to 28 days although health in general has been greatly improved.

This latter factor of sickness insurance would be a natural sequence because the border line between illness and health, between indisposition and illness, and between hypochondriacs and fakers is one which the physician cannot readily diagnose, if at all. The entire question of malingering has become so complicated that a limitation has been placed on medicines, and physicians can no longer prescribe what they think the patient needs but only those cheap remedies listed in a book of medical regulations for insurance purposes. The meaning is that the genuine patient suffers lack of care and the lay bureaucratic apparatus inserts itself between physician and patient.

In Germany the workman pays a premium of between 20 per cent and 30 per cent of his wages and payments start at the age of 14 years; therefore if he pays for the next 45 years and earns only $5.00 weekly, the total sum with interest would amount to $7,000. If he makes $17.50 weekly the amount would be $25,000. What does he receive in return? Mediocre or factory-production medicine of an indifferent character, unemployment wages of a starvation dole character, and the average old age annuity of $7.00 per month for him, $4.50 per month for his widow, and $2.50 for his orphans.

Where does the money go, you ask? Into that bottomless pit called lay administrators, bureaus, and the construction and maintenance of gigantic and costly lay administration buildings which have become inured to graft.

The social insurance scheme in Germany has had the effect of keeping down wages and tending to make practically all of the working population pauperized proletarians. It has also had the effect of producing

vicious frauds which have been deceptive and wasteful of the funds through evasions, and workers have to be set to watch workers, while supervising physicians are set to spy on physicians.

The assault of social insurance in New York some time ago under the guise of the typical "Health Insurance Law" known as the Epstein Bill or the Byrne Bill was furthered principally by representatives of a Trust Foundation who presented a plan whereby the salaries of all persons earning $3,000 per year or less would form a basis of assessments against the worker and his employer in a varying amount to make a total of 4½ per cent while the state would contribute from the general tax funds 1½ per cent.

The law proposed to give disability insurance for the worker up to 26 weeks, and to give to him and all his dependents, regardless of the relationship, free medical, dental, nursing, laboratory, and x-ray services together with free hospitalization, and also prenatal and maternity care; the last also to include disability insurance for the expectant mother if she too were employed. The total collected premiums for this insurance would amount to 6 per cent of the employee's salary in every instance; and since figures were advanced that the average annual income in the state of the group included in the bill was $1,400, it therefore followed that at 6 per cent the average sum per insured would be $84. From this meager stipend would easily have been taken at least two-thirds for administrative expenses and lay salaries, leaving about $28 per year for disability benefits for the insured up to 26 weeks, and medical, dental, nursing, pharmaceutical, laboratory, and hospital expenses for him and his entire family and dependents. It is safe to say that the average family of dependents would certainly have been at least four; and at that rate there would have been a per capita allotment of $7 per person. If this latter sum had been divided equally there would have been the magnificent amount of one dollar for health and sickness disability, one dollar for medical treatment, one dollar for dental services, one dollar for drugs and sundries, one dollar for nursing, one dollar for laboratory and x-rays, and one dollar for hospitalization per year with nothing left over for prenatal and maternity care.

In this bill there was provided a Director of Health Insurance at a salary of $10,000 per annum, and a Health Insurance Board of three members at $7,500 per annum; so you may see what a nice, easy start was provided for soft jobs and treasury raiding which would soon have eaten up the $84 which the poor, deluded, insured employee contributed, and he would have contributed the whole amount regardless of the apparent division of the premium. First, he contributed his share from his salary; next, the employer added his percentage to his operating expenses so that when the employee purchased goods he would pay the additional cost included in the article; and, last, the state contributed 1½ per cent from the general tax fund; and since the employee was also a taxpayer he paid his proportion of the burden. From the standpoint of economics the whole scheme was simply a subterfuge for grabbing $84 from the employee and using it for the purpose of creating a lot of fat sinecures.

Under such schemes the professions are dominated by lay control, and if the experiences of European countries mean anything as a precedent it spells the rapid decline and destruction of these professions. It means crookedness, graft, lying, cheating, and disinterested indifference. So grave has this situation become in Germany that today there are two civilian employees for every physician involved in health work. In England the health insurance administrators complain that they cannot get good physicians because the good ones enter into either private practice, the service of the Army or the Navy, or else leave the country. And why should they not leave the country if possible, for in England today the average number of patients under the panel insurance system is 900 and the average amount of money each one of the patients pays the physician is $2.00, making a grand total of $1,800 per year for caring for 900 patients; and this is gross income.

Here is the history of some of the paternalistic governmental endeavors in this country: In 1915 a law was passed which was to decrease or eliminate orphans of widowed or abandoned mothers. It provided for a payment of $7.50 monthly for each such child. In that year there were 1,500 orphans. The following year there were 3,600 orphans and in the year 1930 there were 36,000 with the amount per orphan increased to $9.50. Another such step was the Workmen's Compensation Insurance. It was supposed to reduce industrial acci-

dents so that they would gradually disappear, but the result has been that industrial accidents have increased several hundred per cent; to say nothing about the graft and rottenness of the whole mess. Prohibition was supposed to eliminate drunkenness, but alcoholism increased by leaps and bounds and into channels where previously the very thought of it had been considered abhorrent. It seems unnecessary to call attention to the crookedness, graft, and flouting of all laws which became coincidental or to mention the millions or billions which were lost in legitimate revenue and squandered in vain attempts at enforcement.

If such endeavors of the government are a guide, and I think they are, then we should expect that bureaucratized medical and dental care would decrease, because there would be no funds under such crazy legislation to provide it, and the insured individual would resist purchasing additional services because he would feel that he had already been taxed for this purpose; therefore, (ad infinitum), health neglect would be rapid and progressive, and the very conditions which such laws are claimed to correct would be increased.

Sickness and disability are uninsurable: first, because they are not definitely definable; second, because there is no actuarial basis to proceed upon; third, because no reserve fund is created under typical bills without which all insurance is useless; and fourth, because the system depends upon taking the money from well and healthy workers and handing it over to those who are sick and disabled so that as the ratio changes between these two groups the insecurity increases. In the event this type of bill ever becomes a law we may also look forward to a gradual decrease in wages because the employer will take into consideration the amount of tax he will have to pay the state under the Health Insurance Law and mentally deduct that from the employee's stipend. This step is in keeping with that which has transpired in other countries.

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FLUID POSTOPERATIVELY

BERNARD FANTUS, Chicago (*Journal A. M. A.*, July 4, 1936), recommends that excepting in emergency, hypohydrated and salt-starved patients must not be sent to the operating room.

If it were a standing order that no patient should be sent to the operating room unless he had passed at least 1,500 cc. of urine in the preceding twenty-four hours and this urine contained at least 0.5 per cent of chloride, this requirement would be automatically met. Patients who cannot be prepared in this way for the operative ordeal should receive special care during, as well as after, operation to minimize the disadvantage from which they are suffering.

Patients who have undergone serious operations should have a salt and fluid balance sheet established for them in which the quantities of fluid administered and of urine eliminated are carefully recorded and a balance is struck at least every twelve hours to warn the attending physician of approaching danger. The salt elimination in the urine should be estimated postoperatively in the following manner: Ten drops of urine are placed in a test tube, to which 1 drop of a 1 to 5 potassium chromate solution is added. The fluid will now assume a somewhat distinctly yellow color. A 2.9 per cent silver nitrate solution is added drop by drop until a permanent and distinct color change to red-brown occurs.

The number of drops required to produce the change of color expresses in grams the content of chloride per liter of urine. Sugar should also be tested for in the urine not only preoperatively but postoperatively as well, and the qualitative test probably suffices.

When sugar is found to be present in the urine of a patient who is given dextrose, it is an indication that the patient is receiving more dextrose than he can take care of. If the patient is receiving large quantities of dextrose, the obvious indication is to reduce the intake. If his intake has not been excessive, the administration of insulin may possibly be life saving, for some of these patients may have been rendered temporarily diabetic.

Postoperative use of fluids, to be properly individualized, demands observation of balance between fluid intake and fluid elimination, the determination of the percentage of chloride in the urine and the testing for the presence in it of sugar.

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Neurology

Treatment of Disseminated Sclerosis As a Deficiency Disease

● A. GOODALL and J. K. SLATER (*Edinburgh Medical Journal, 43:368-374, June, 1936*) note that the fact that various disorders of the nervous system, including beri-beri and pellagra, have been found to be due to a vitamin deficiency suggests that administration of a vitamin or vitamins might either supply a deficiency in disseminated sclerosis or increase resistance to some unknown toxin or infection. After treating a few cases of multiple sclerosis with a liver diet with encouraging results, the authors modified their treatment by reducing the amount of liver used to ½ lb. two or three times a week and prescribing a diet of eggs, milk, fresh vegetables and fruit, greatly restricting or cutting out altogether the cereals. Patients are encouraged to carry on their ordinary vocations as far as possible and instructed in simple exercises to correct incoordination of movements. Of 50 cases treated, 32 had symptoms of more than two years' duration on beginning treatment; 9 symptoms of one to two years' duration; and 9 of less than a year's duration. Of the 32 cases in the first group, all but 6 have shown definite improvement; of the 6 cases, all of whom showed advanced symptoms, 2 show no change (one of these a relapse after temporary improvement); 3 are worse and one has died; 2 of this group failed to follow the diet prescribed. All the others show definite improvement; in several instances patients who were helpless have had their ability to walk restored. In the two groups of shorter duration before beginning treatment, all have shown definite improvement; most of them are able to work, and 4 are listed as "recovered," being free from symptoms and doing their full work. These 4 patients had had slight symptoms for one to two years. All of the patients with symptoms of less than one year's duration when treatment was begun are now at work, and 6 of them have been under observation for two to five years without any recurrence.

COMMENT

The reviewer has been using liver extract intensively in "multiple sclerosis" for at least five years. There have been instances where the patients have shown a remarkable remission. Again, despite its use, an exacerbation of the disorder occurs. We feel that it should be used but do not believe that it is the final answer. Likewise, quinine, at first so widely heralded, does not produce permanent relief.

The very widespread use of many forms of treatment indicates the doubt in the minds of all of us. However, the gospel of fatness should be preached. Improvement in a case is often coincidental with a gain in weight.

H. R. M.

Subdural Traction and Posttraumatic Headache

● W. PENFIELD and N. C. NORCROSS (*Archives of Neurology and Psychiatry, 36:75-94, June, 1936*) note that one of the most frequent sequelae of head injury is posttraumatic headache; many patients suffering from such posttraumatic headache are "under the unjust suspicion of being neurotic or malingering." In the typical posttraumatic syndrome the headache is associated with dizziness. Physical examination of such patients shows nothing

typical, but the encephalogram shows abnormalities of the subdural spaces. In many cases the symptoms can be relieved by lumbar insufflation of air, but this must be done so as to keep the air out of the ventricles and place it in the subarachnoid and subdural spaces over the hemispheres (technique described by Penfield in 1927). Roentgenograms taken immediately after this procedure show relatively normal subdural space, but if taken on the next day, they may show the air in the subdural space, sometimes "trapped in small pockets;" the air may remain in the subdural space for some time. In 25 cases of posttraumatic headache and dizziness in which this method of spinal insufflation of air was used in treatment, the headache was entirely relieved in 56 per cent., and considerably improved in an additional 12 per cent.; the dizziness was entirely relieved in 48 per cent., and considerably relieved in 24 per cent. In 10 cases in which roentgenograms taken on the second day after spinal insufflation of air showed a large amount of air in the subdural space, 7 were cured; in 8 cases where the filling of the subdural space was poor, only one had complete relief from both headache and dizziness. In 6 cases cranial insufflation of air into the subdural space was carried out through a small trephine opening on the side on which the headache was felt. Of these cases, one was cured, 3 improved, and 2 completely relieved of headache, but with occasional attacks of dizziness. These patients had shown no improvement after spinal insufflation of air. In 4 of these cases definite adhesions were found in the subdural space; in one a brown membrane over one hemisphere. In several of the cases pressure on one or two small areas on the underside of the dura through a small hole in the dura produced pain resembling the chronic headache; in most areas the dura was insensitive. From these studies the authors conclude that posttraumatic headache is due to an intimate adhesion of the arachnoidea to the dura, obliterating the subdural space in a smaller or larger area, but without dense adhesions. Pain is due to pressure or traction on a sensitive area, usually a meningeal artery.

Occurrence of Convulsions In Over 700 Verified Intracranial Tumors

● L. T. FURLOW and ERNEST SACHS (*Southern Surgeon, 5:179-191, June, 1936*) report a study of the incidence of convulsions in cases of brain tumor. In 724 patients with verified brain tumor, 397 were cerebral or supratentorial tumors, 247 were cerebellar or infratentorial tumors: and 79 were pituitary tumors. In this series, 150 or 20.7 per cent. had convulsions. Convulsions occurred most frequently in cerebral tumors, as 138 of the patients with convulsions had a cerebral tumor; 12 had a cerebellar tumor; convulsions did not occur in any case of pituitary tumor. The highest incidence of convulsions was observed in slowly growing tumors—astrocytomas, meningeal fibroblastomas and spongioblastoma multiforme. Of 51 cases of astrocytoma, 30, or 60 per cent., showed convulsions as a symptom, and in 26 of these cases convulsions were the first symptom. Of 79 cases of meningeal fibroblastomas, 28 had convulsions, or 35.4 per cent., and in 22, the convulsions were the first symptom. Of 66 cases of spongioblastoma multiforme, 25, or 38 per cent., had convulsions, but the convulsions were the first symptoms in only 12 cases. In rapidly growing cerebral tumors convulsions occurred fairly frequently during the course of the disease, but rarely as the first symptom. Convulsions occurred more frequently in frontal lobe tumors than in those involving other lobes. Since convulsions occur frequently in brain tumors, "every adult having a convulsion should be considered to have a tumor until proven otherwise." This is especially important since convulsions occur as an early symptom most frequently in the slowly growing cerebral tumors in which surgical treatment, if sufficiently early, gives good results. The diagnostic study of every case of convulsions in an adult would often lead to the early diagnosis of such tumors and their successful operative removal.

COMMENT

Virtually all neurologists are agreed that convulsions beginning in an adult out of the clear sky without apparent cause should be very carefully investigated. A developing brain tumor should be the first suspicion.

Since few of such patients manifest any focal clinical localizing signs whatsoever, we are forced to resort to encephalographic air studies as an aid for localization. A careful follow-up over a protracted period is often necessary before the basic cause is ascertained.

A point, well established, but not generally recognized, is that a convulsion may occur as the result of a lesion not in the

cerebrum. Practically one-third of the above series were found below the tentorium.

Although the above paper presents nothing new, it is of value in restressing the importance of not neglecting to investigate convulsive seizures most carefully, particularly in an adult. Too often the single swallow of one attack is given the discouraging label of the full summer of idiopathic epilepsy.

H. R. M.

Epileptic Crises at the Onset of Multiple Sclerosis

● G. GUILLAIN and P. MOLLARET (*Bulletin de l'Académie de médicine, 100: 620-631, May 5, 1936*) note that epileptic attacks have been considered as a rare symptom in multiple sclerosis, but they believe that such attacks may occur more frequently than has been supposed in cases of multiple sclerosis, and may be the first symptom to be observed. They report 4 cases in which epileptic attacks were the first symptom of multiple sclerosis; in 3 of these cases the attacks were of the Jacksonian type; in one, generalized. In 3 cases (two Jacksonian and one generalized) the epileptic attacks preceded the other symptoms and signs of multiple sclerosis by several years. In the fourth case, other symptoms developed at the same time as the Jacksonian epileptic attacks. The authors cite other cases reported in literature in some of which epileptic attacks have been the first symptom observed in multiple sclerosis. The authors are convinced that the occurrence of the epileptic attacks and the type of the attacks depends upon the involvement of definite areas in the brain by the typical lesions of multiple sclerosis. When the attacks precede the other symptoms and signs by several years, it indicates that the lesions remain localized and that other areas are involved but slowly. This is true also of other cases of multiple sclerosis, in which a single symptom—such as retrobulbar neuritis—may be present for some time before other symptoms develop, owing to slow involvement of other areas of the central nervous system.

COMMENT

Convulsive seizures occurring at the onset or during the course of disseminated sclerosis are quite uncommon. Existing alone, it is only a symptom. It would be impossible to suspect a developing multiple sclerosis unless other evidences of diffuse involvement of the central nervous system were present.

The occurrence of idiopathic convulsive seizures is so common that it requires a careful analysis of a given case to warrant the suspicion that the convulsive seizure could be due to a plaque in the cerebrum. I feel that only pathologic examination could clear up this point, particularly where the convulsions had existed for some time prior to the onset of symptoms suggesting multiple sclerosis. On the other hand the development of convulsive attacks after a case is established offers a more simple explanation.

H. R. M.

Similarities Between Some Forms of Encephalomyelitis and Multiple Sclerosis

● T. J. PUTNAM (*Archives of Neurology and Psychiatry, 35:1289-1308, June, 1396*) cites 2 cases from literature in which a patient developed symptoms of cerebral involvement in the course of measles, and "passed through a course of remissions and exacerbations for several months;" at autopsy in both cases typical plaques of multiple sclerosis were found. In experiments on animals, lesions resembling those of both acute encephalomyelitis and multiple sclerosis have been produced by the use of tetanus toxin, by experimental obstruction of cerebral venules and by chronic cyanide poisoning. From a comparison of the histological findings in 35 plaques from 11 cases of multiple sclerosis and specimens from cases of acute encephalomyelitis of various types (including postvaccinal encephalitis), Putnam concludes that all the histological characteristics of encephalomyelitis may be found in varying degree in the more acute plaques of multiple sclerosis. The axis-cylinders may be preserved in the lesions of encaphalomyelitis as well as in multiple sclerosis, especially in the more acute plaques, but they may be destroyed in some multiple sclerosis plaques. Glial fibrosis is the one distinguishing characteristic of multiple sclerosis plaques, but this is not constant in all plaques, and it is probably an evidence of chronicity. Glial fibrosis is not found in cases of encephalomyelitis except in a few instances where the patient has survived for several months. There is frequently a proliferation of astrocytes which may be regarded as a forerunner of gliosis. The

structural differences between the lesions of encephalomyelitis and multiple sclerosis can be explained as due to the differences in the intensity and duration of the diseases.

Late Recrudescence in Encephalitis Lethargica

● A. GORDON (*Annals of Internal Medicine, 9:1725-1728, June, 1936*) reports 2 cases of encephalitis lethargica with recrudescence of symptoms at intervals of several years. In one case typical parkinsonism developed after the attack, and at intervals of several years, three additional different symptoms appeared: oculogyric crises; attacks of rigidity of the tongue; attacks of uncontrollable closing of the eyelids. In the other case the first sequel was a speech disorder, followed at intervals by a paretic state of the right arm; extensor plantar reflex on the right side; progressive spasmodic torticollis. Such cases indicate "the chronicity of the pathological process and the persistence of the virus."

COMMENT

The above paper stresses the basis of why this disease deserves the title of the worst scourge of the twentieth century. Horribly deforming and physically disabling in its effects, it presents a tremendous social problem. Unemployable in business, disliked at home because of personality changes, virtually ostracized for the same reason, these patients present medicine's most discouraging problem. Viewed broadly, practically nothing has been offered in a constructive and helpful fashion. The end is institutional care.

Made worse by other illnesses, perhaps further crippled by pregnancy, and unable to support or take care of a family, the patient is justified in being highly critical.

H. R. M.

●

Physical Therapy

Short Wave Ultra-Violet Radiation In Dermatological Practice

● F. P. McCARTHY (*Medical Record, 143:432-435, May 20, 1936*) reports the use of short wave ultra-violet irradiation—the cold quartz lamp—in various skin diseases. For local lesions, the grid lamp was used at a distance of five to six inches for an average of one minute. For more general exposure, as in pityriasis rosea and generalized psoriasis, the grid was dismounted and the lamp moved over the surface of the body at a distance of three to four inches for about two minutes (front and back). By this method an erythema was produced which began in a few hours and persisted for a few days followed by desquamation; pigmentation occurred in a small percentage of cases, persisting one or two months in two instances. In using the cold quartz lamp in 86 cases of various skin diseases, chiefly acne vulgaris, eczema and psoriasis, the author found that the clinical results were much the same as with air and water cooled lamps giving ultra-violet rays of longer wave length. In some cases of acne vulgaris in young patients, definitely better results were obtained with the cold quartz lamp than with the Alpine lamp. In eczema relief of pruritus was obtained in all cases, but only eczemas of recent origin with little or no thickening of the skin showed marked improvement otherwise. No definite conclusions in regard to the special therapeutic value of the cold quartz lamp can be reached until larger series of cases are treated by different observers.

COMMENT

The cold quartz lamp gives off most of its energy in a band of the ultraviolet spectrum 2537 Angstrom Units long. This band has little general effect and only infrequently causes pigmentation.

While no one has proven ultraviolet energy is bactericidal, this wave seems to have great bacteriostatic effects and hence makes the cold quartz type of lamp more useful in dermatology than the standard mercury arc.

N. E. T.

Counter-Irritation by Ultra-Violet Light

● A. EIDNOW (*Lancet, 1:1404-1406, June 20, 1936*) reports the use of ultra-violet light for counter-irritation in cases where this treatment is indicated. Wave-lengths shorter than 3,000 Angstrom units are employed which produce an erythema in four to six hours. The dosage and technique control the degree of skin reaction, which can be varied to cause a mild erythema or a definitely severe blistering of the skin. Employing the ultra-violet rays as a counter-irritant, it is possible to apply the rays

directly to any area and to define and control the degree of reaction accurately, which is not always possible with chemical and other counter-irritants. In using the ultra-violet rays for this purpose, a skin area measuring roughly 10 by 12 inches is exposed, the surrounding skin being protected from the rays. A quartz air-cooled mercury vapor lamp is employed at a distance of 12 in. for an exposure of twenty minutes, giving a dosage equivalent of ten normal skin erythema doses. The irradiated area and surrounding skin margin for one to two inches are covered by overlapping elastoplast strips. The plaster is left undisturbed for fourteen days; it causes but slight, if any, discomfort, and when it is removed, it is found that desquamation and a full exudative reaction have occurred. This method has been used in the treatment of various forms of neuritis and fibrositis, swollen joints, and some cases of bronchial asthma.

COMMENT

Undoubtedly much of the effect achieved in the skin with ultraviolet therapy is due to the long lasting erythema producing counter-irritation. This has been known for years and is responsible for the effectiveness of ultraviolet in skin conditions, rather than any theoretical, specific bactericidal action.

N. E. T.

Hypertension and Diabetes: Treatment by Radiotherapy

● J. H. HUTTON (*American Journal of Roentgenology, 35:813-817, June, 1936*) finds considerable evidence that essential hypertension and diabetes are closely related to each other and that in both conditions dysfunction of the pituitary or adrenals or both is an etiological factor. He is of the opinion that in the treatment of diabetes, the attention must not be directed to the pancreas exclusively. Accordingly both hypertension and diabetes have been treated by roentgen-ray irradiation of the pituitary and the adrenals. After trial of various dosages, a dosage of 76 roentgens at each treatment to both the pituitary and the adrenals has been found to give best results, with a skin target distance of 50 cm., and an exposure time of 7 min. (which may be increased in obese patients). Both sides of the pituitary and both adrenals are treated at the same time. Treatments are given at intervals of a week for six weeks unless blood pressure in hypertensive cases is satisfactorily reduced by fewer treatments. If necessary the course can be repeated after an interval of a month or six weeks. Of 157 cases of essential hypertension treated, 96 were improved, 24 unimproved, 28 had insufficient treatment and 9 could not be followed. In 18 patients with both diabetes mellitus and hypertension, 7 improved as to both conditions, 4 showed definite diminution of hypertension, 3 improvement in the diabetes, 3 had insufficient treatment and one was not followed. Of 45 patients with diabetes without hypertension, 20 were definitely improved with increased carbohydrate tolerance, 12 were not improved, 11 had insufficient treatment and 2 could not be followed.

COMMENT

The effect of roentgen rays on the endocrine system has been realized for some time, but the whole subject of endocrinology is so empirical that only by such studies as these will the subject advance to a rational stage.

N. E. T.

Irradiation of the Entire Body by the Roentgen Ray

● S. S. SANDERSON (*American Journal of Roentgenology, 35:670-680, May, 1936*) reports the treatment of 22 cases of Hodgkin's disease, mycosis fungoides, polycythemia and acute and chronic leukemia with roentgen-ray irradiations of the entire body. The technique used was similar to that advocated by Teschendorf in 1927. The factors employed are: 200kv. (peak), 4 and 6 ma., 0.5 mm. copper filter and 2.25 meter distance, the entire body being treated at one time. The patient is treated on alternate sides, usually for an hour, on successive days. It was found that improvement could be brought about in some patients by general roentgen irradiations with smaller total dosages than are usually employed. The best results were obtained in Hodgkin's disease, polycythemia and myelogenous leukemia. In the more advanced cases, improvement was temporary, but the fact that any improvement was obtained is encouraging. Further trial of this method of treatment "with a view to refining the technique" the author believes is justified.

COMMENT

The old shotgun prescription of medicine in the gay nineties now comes out in roentgen-ray doses. Such a treatment will have to be refined a great deal before its rationale can be explained.

N. E. T.

Electro-Aeroiono-Therapy For Influenza

● D. M. ROSSIISKY and L. J. VILENKIN of Moscow, Russia, (*Acta medica Scandinavica, 89:190-198, June 12, 1936*) note that aeroiono-therapy has been employed in the treatment of high blood pressure and arthritis and in bronchial asthma, and has also been found to accelerate the healing of wounds. One of the authors (L. J. V.) has designed an apparatus to provide for aeroionic inhalations in the treatment of influenza and other respiratory tract infections. This apparatus has two pairs of electrodes, and the spark discharges are produced by a special conductor of similar design as the main conductors of the apparatus; the currents of this special conductor are used for the spark discharge in the electro-ionic inhaler (also designed by Vilenkin). The patient is insulated from the earth by sitting on a stool with legs made of insulating material, and connected with the anode of the electrostatic apparatus, while inhaling air from the electroionic inhaler. If the patient is charged positively to a high potential only negative ions reach him. In some cases treatment with the electroionic inhalations was combined with irradiation by ultra-violet rays from the quartz lamp; the lamp was placed at a distance of 40 to 50 cm. from the patient for the first treatment and the distance gradually reduced to 30 cm.; the time of treatment was lengthened gradually from five or ten minutes to twenty or thirty minutes. In 300 cases of influenza treated by aeroionic inhalations alone or combined with the ultra-violet irradiation, the fever subsided after the first treatment and the pulse improved. Patients usually experienced some relief of headache and other symptoms after the first treatment, and as treatment was continued, symptoms improved rapidly, sneezing, coughing and nasal secretion diminishing. The duration of the illness did not usually exceed two to three days, while in cases not treated by this method, the duration was usually five to eight days even without complications. The organisms most frequently found in these cases were Pfeiffer bacilli, gram-positive diplococci, staphylococci and streptococci; these organisms disappeared rapidly under treatment. If the electro-aeroiono-therapy was employed in the early stages of influenza, complications did not develop. Persons treated by this method showed no recurrences although many were subsequently in close contact with influenza patients.

COMMENT

The inhalation of electrical charges for respiratory conditions has a future. The change in tissue electrical potential, by a means such as is here described, cannot be thrown out as worthless. Deeper studies in biophysics will make such treatment of increasing importance but should also lead to refinement of use.

N. E. T.

Treatment of Pneumonia by Electromagnetic Induction

● M. G. SCHMIDT (*Archives of Physical Therapy, 17:299-304, May, 1936*) reports the treatment of various types of pneumonia by electromagnetic induction. The dosage must be determined for each individual case, and must be such as to establish and maintain an effective active hyperemia. The dosage must be varied "even during the course of an individual case," according to the stage of the disease. The author has found the efficacy of the prolonged and frequent applications of electromagnetic induction as used in the treatment of pneumonia depends upon the use of a low intensity; he never uses more than 60 per cent. of the output of the apparatus and in some cases not more than 20 per cent. He reports 4 illustrative cases showing different dosages employed: 2 cases of lobar pneumonia, one case of bronchopneumonia and one of postoperative pneumonia. He has found that electromagnetic induction is of benefit in all types of pneumonia; the maximum improvement has been obtained during the first forty-eight hours of treatment. In all patients the relief of dyspnea, cyanosis and pain was marked, beginning usually during and after the first treatment, and being complete as a rule after the second treatment. In all cases treated the temperature became and remained normal in less than eighty hours after beginning treatment; there was no disturbance of the pulse rate caused by the treatment,

and the pulse improved as the temperature fell. Treatment, the author notes, should be continued until all pathological processes disappear, even though the temperature is normal and the symptoms have been relieved.

COMMENT

This is another method of using deep heat in the treatment of pneumonia, but is not to be too highly recommended because, although the author states "the dosage must be determined for each individual case," no one yet has been able to determine the dose administered by any of these "short wave" machines. The method is too empirical.

N. E. T.

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Public Health Industrial Medicine and Social Hygiene

Diagnosis of Infectious Mononucleosis In Public Health Laboratories

● C. A. STUART and F. L. MICKLE (*American Journal of Public Health, 26: 677-680, July, 1936*) note that little attention was devoted to infectious mononucleosis, or glandular fever, until about 1918-1920, when a number of cases that had been diagnosed as hopeless acute lymphatic leukemia recovered in one to two weeks. Since that time it has been recognized that infectious mononucleosis is an infectious disease often occurring in epidemics. Its importance "lies not so much in the severity of the infection as in the confusing nature of the clinical symptoms." As a diagnostic measure, a serum test has been devised based on the presence of sheep heterophile antibodies in the blood of patients with infectious mononucleosis. This consists in adding 0.5 ml. of 1 per cent. suspension of washed sheep cells to 0.5 ml. of serial dilutions of the patient's serum, and noting the degree of agglutination after incubation at 37° C. for two to four hours. This has proved to be a satisfactory diagnostic or "confirmatory diagnostic" test in the great majority of cases. It is a simple test than can easily be carried out in hospital or public health laboratories. But on certain occasions more elaborate adsorption tests with guinea-pig kidney or beef cells are necessary; the complete adsorption of "a sufficient part" of the sheep cell agglutinins in such tests indicates the diagnosis of infectious mononucleosis. These special adsorption tests have been used in the Connecticut State Department of Health laboratories and found to be very useful in certain cases not giving definite results with the simpler test. The authors are of the opinion that the laboratory diagnosis of infectious mononucleosis "will become increasingly important as a public health procedure."

COMMENT

In order to avoid the embarrassment of mistaken diagnoses and the concomitant shock to patients or families, it seems desirable that the test described by Stuart and Mickle should be applied in cases of suspected acute lymphatic leukemia.

W. C.

Transmission of Hemolytic Streptococci by Dust

● E. WHITE (*Lancet, 1:941-944, April 25, 1936*) notes that the possibility of airborne infection with hemolytic streptococci has been suggested by the circumstances of some outbreaks of puerperal infection; this possibility must also be considered in other types of infection due to hemolytic streptococci. At the Queen Charlotte Hospital, London, England, it was found that the dust of single bed wards harboring patients who were discharging hemolytic streptococci were always contaminated with that organism, and that the strain isolated from the dust was identical with that infecting the patient. Hemolytic streptococci were rarely found in the dust of similar wards housing patients with other infections, and if present at all showed only scanty growths. Spraying with formalin destroyed hemolytic streptococci in rooms contaminated with these organisms. One of the hospital staff exposed to dust carrying hemolytic streptococci developed an acute pharyngitis. It would seem probable from these findings and those reported by others that a healthy throat carrier of hemolytic streptococci "creates a zone of streptococcus-carrying particles around himself."

Urine Sulfate Determinations as a Measure of Benzene Exposure

● W. P. YANT, H. H. SCHRENK and F. A. PATTY (*Journal of Industrial Hygiene,*

18:349-356, June, 1936) report a study of the urinary sulfates in 60 workers exposed to benzene vapor in five industrial plants, in comparison with 33 controls—workers in the same plants not exposed to benzene. In the workers exposed to benzene, 63.3 per cent. showed subnormal percentages of inorganic sulfates of total sulfates. This decrease in the percentages of inorganic urinary sulfates had previously been found to be characteristic in animals (dogs) exposed to benzene vapors. Only 27.6 per cent. of these workers had subnormal hemoglobin values; 35.6 per cent. had subnormal red blood cell counts; 33.9 per cent. showed subnormal white cell counts; and 21 per cent. subnormal platelet counts. The urinary sulfate changes were found to parallel the benzene concentration in the air. The authors conclude that in workers exposed to benzene, the urinary sulfate response is a more sensitive and more consistent indication of the effect of benzene than any changes in the blood. The blood changes are due to a response of the hematopoietic system, while the urinary response is apparently a chemical reaction. This urinary sulfate response occurs in advance of anemia and leucopenia or other manifestations of benzene poisoning and is a more accurate measure of benzene exposure.

Bone Changes in Chronic Fluorine Intoxication

● P. A. BISHOP (*American Journal of Roentgenology, 35:577-585, May, 1936*) notes that cyrolite—an ore used extensively as a source of aluminum, alum and caustic soda—is a fluoride of sodium and aluminum, containing as much as 54 per cent. of fluorine, and workers who handle it are exposed to the hazard of swallowing some of the dust with resultant fluorine poisoning. This ore is mined chiefly in Scandinavia and Canada. Fleming-Moller and Gudjonsson found roentgenographic evidence of bone changes indicative of fluorine poisoning in men working in the presence of cryolite dust. In the United States the chief danger of industrial fluorine poisoning is among workers in the manufacture of superphosphate fertilizers from phosphate rock, which contains about 4 per cent. fluorine. In a man who had worked for eighteen years in a fertilizer plant, bone changes similar to those described by the Scandinavian investigators were found, although there was no history of symptoms of chronic fluorine intoxication. The chief findings were increase in bone density without alteration of normal bone structure, lack of normal "sharpness" of the bone outlines and extension of calcification into ligamentous attachments. The patient died from luetic heart disease about a year and a half after the roentgenographic studies were made, without returning to work; at autopsy the fluorine content of the bones was found to be definitely increased above normal. This study, therefore, confirms the possibility of chronic fluorine intoxication in workers in phosphate rock similar to that found in cryolite mining .

Cost of Syphilis in a Representative American City

● W. C. THOMPSON, W. A. BRUMFIELD and L. CORNWALL (*American Journal of Syphilis, 20:243-265, May, 1936*) report a study of the incidence and cost of syphilis in Baltimore, Md. They found that in this city with a population of 828,000, about 9,000 new syphilitic patients are discovered annually, of whom about 4,000 have early syphilis and about 5,000 late syphilis. Sixty per cent. of the patients with syphilis were in city or state hospitals. Illness directly due to syphilis accounted for 59,485 hospital bed days. Neurosyphilis accounted for more than half of these patients and for 89 per cent. of the hospital bed days at an estimated cost of $50,000. The cost of hospital care for cases of cardiovascular syphilis was estimated (roughly) as $11,500. The total cost of hospital care of syphilitic patients in 1933 was estimated at $75,250, of which $49,500 was direct expense to the taxpayers. The total cost of the operation of clinics for ambulatory syphilitic patients was estimated at $61,500, of which $22,000 was paid by the city and $6,800 by the state. The sum available for ambulatory clinics is "inadequate to care for the barest existing need," and no treatment at all is available for many syphilitics. The total direct cost of syphilis to the City of Baltimore in one year (1933) was estimated at $170,000. If a larger sum (minimum estimate $75,000 annually) was available for adequate treatment of early (ambulatory) cases of syphilis, the expenditure for hospital bed care "would be promptly and materially reduced" by providing treatment which prevents the development of the late sequelae of the disease; and, more important still,

the incidence of fresh infections with syphilis would also be reduced by proper treatment and control of infectious cases. "Only by a reduction in the incidence of syphilis," the authors point out, "can the total expenditure be reduced."

COMMENT

It has been calculated by the American Social Hygiene Association, Inc., that one dollar spent on the proper medical care of early syphilis saves nine dollars cost of care of late syphilis. The study by Thompson, Brumfield and Cornwall includes only the "direct" costs of syphilis and omits the "indirect" costs such as lost wages, money spent on quacks and patent medicine, etc.

Prevention of Venereal Diseases in Sweden

● At a meeting of the American Public Health Association in 1935, E. RIETZ, Commissioner of Health of Stockholm, Sweden (*American Journal of Public Health, 26:357-363, April, 1936*), outlined the methods used for the control of venereal diseases in Sweden under the law of 1918. Under this law every person suffering from venereal disease is required to submit to treatment by a physician. Every such person has a right to claim free medical treatment for venereal disease through the public health authorities. In cities of more than 20,000 inhabitants special clinics are provided. Most persons who can afford to pay prefer to go to a private physician for treatment to avoid publicity and "official interference." Such patients are not in any way under the control of the public health authorities if they continue under their physician's direction, or are transferred by him to another physician. If, however, they discontinue or neglect treatment, the physician must report them to the public health officer. The law requires that both private physicians and public health officers in charge of venereal patients search for the source of infection and bring such persons under treatment. There is a penalty "up to forced labor" for knowingly transmitting a venereal disease. This law has resulted in a marked reduction in the incidence of syphilis, but for gonorrhea the results are "decidedly poorer." Dr. Parran, commenting on this report in the discussion, stated that: "Syphilis in Sweden is no longer a major health problem. The methods by which this result has been accomplished can be applied to the United States."

COMMENT

Those interested in this article by Dr. Rietz should read the report of the New York City Commission to Investigate the Prevention and Control of Syphilis and Gonorrhea in Scandinavian Countries and Great Britain, published in the July issue of the American Journal of Syphilis, Gonorrhea and Venereal Diseases, in which an account is given not only of the plans in operation in Sweden but also those in Denmark, Norway and Great Britain. The report offers much encouragement to American workers.

W. C.

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Ophthalmology

Relation Between Blue Scleras and Hyperparathyroidism

● A. RADOS and L. C. ROSENBERG (*Archives of Ophthalmology, 16:8-35, July, 1936*) report a study of blood calcium, phosphorus and phosphates and the calcium metabolism in 2 children with blue scleras and multiple fractures. No abnormalities were found sufficient to warrant a supposition of endocrine disturbance, certainly not the negative calcium balance characteristic of osteitis fibrosa cystica which is definitely associated with hyperactivity of the parathyroids. The authors note other differences between osteogenesis imperfecta with blue scleras and osteitis fibrosa cystica, which indicate that the two conditions are distinct and that hyperparathyroidism is not related to blue scleras. In osteogenesis imperfecta with blue scleras, there is evidence of definite hereditary transmission and the spontaneous fractures occur *in utero* or in infancy; deafness usually develops in early adult life about the age of twenty. In osteitis fibrosa cystica, due to hyperparathyroidism, there is no hereditary tendency and the fractures occur in adult life. In a review of the reports of proved cases of hyperparathyroidism, the authors find but 4 in more than 100 cases in which the occurrence of blue scleras was noted. They regard these cases as rare exceptions, in which it is possible that hyperparathyroidism has been "superimposed on a pre-existent congenital anomaly."

Cod-Liver Oil in External Afflictions of the Eyes

● E. STEVENSON (*British Journal of Ophthalmology, 20:416-418, July, 1936*) reports the use of cod-liver oil in the local treatment of injuries and diseases of the eye. It was used first in burns involving the eyelids and cornea, and subsequently in ulcers and other conditions where there is loss of substance. In hypopyon ulcer, he has found it best not to use the oil in the early stages, but after the active septic process has subsided it gives very satisfactory healing in this lesion. In over 150 cases treated at his clinic, the author has found that cod-liver oil applied locally promotes the growth of natural tissues and inhibits the growth of scar tissues; it is harmless and can be used in conjunction with any other treatment indicated. In an out-patient clinic, it has the additional advantage of being cheap and easily applied; and the author has found its use reduced the number of attendances and treatments needed. In the small quantities used for eye treatments, its odor is not a disadvantage.

Neoarsphenamine in Nonsyphilitic Inflammations of the Uvea

● H. LUCIC (*Archives of Ophthalmology, 15:826, May, 1936*) states that he has found neoarsphenamine given intravenously is effective in the treatment of nonsyphilitic inflammations of the eye. The individual dose is the same as that recommended for patients with syphilis; in acute iritis it is rarely necessary to give more than four injections. In chronic conditions "several intermittent injections" must be given. Each case must be treated individually according to the reaction produced and the results obtained. The author reports 10 illustrative cases. He has found neoarsphenamine of definite value in acute and chronic iridocyclitis of doubtful etiology and if due to focal infection; and also in the treatment of sympathetic ophthalmia.

Local Non-Surgical Measures for Various Types of Glaucoma

● J. GREEN (*Southern Medical Journal, 29:609-611, June, 1936*) notes that in some instances "a suspicion of impending glaucoma" may be suggested by the patient's family history, by existence of the disease in the opposite eye, by variations in intraocular pressure or by the presence of vague symptoms. In such cases, the author prescribes a mixture of pilocarpine muriate (gr. 1) and epinephrine chloride (gtt. 20) in distilled water (1 oz.) to be used three times a day. In the treatment of glaucoma simplex, he considers that medical treatment is indicated chiefly in older patients, and only when the patient can be kept under careful observation. "Clinic patients who are notoriously irregular in attendance and careless about carrying out continuous treatment, should be operated upon shortly after the diagnosis is made." In the medical treatment, the two chief drugs are pilocarpine and physostigmine; treatment is begun with a 0.5 per cent. solution of pilocarpine instilled four times a day, and a 0.2 per cent. solution of physostigmine instilled once a day at bed time. The strength of the solutions is increased if necessary to obtain "an effective miosis and an adequate reduction of tension." The use of epinephrine in the form of epinephrine bitartrate in an aqueous solution has been found to be a valuable adjunct to the use of the miotics; solutions of 0.5 to 2 per cent. are usually employed. Instillations are given once or twice a week; and in most instances lower the intra-ocular tension 10 to 15 mm. mercury below the level obtained with the miotics alone. During the first week of treatment, the patient is seen every other day at least for a vision test, tonometric measurement, and an observation of the degree and duration of miosis. At the end of the second week, the visual fields and scotomata are remeasured. At the end of two months, the efficacy of the treatment in controlling the glaucoma can usually be determined. The medical treatment has its greatest value in elderly patients with a relatively inactive glaucoma; it should not be continued longer than one year in younger patients unless the glaucoma is "being held in absolute check." In acute congestive glaucoma, the author believes intensive treatment with miotics and hot packs is indicated for at least twelve hours; in most cases an early operation (basal iridectomy) is then indicated.

COMMENT

We know far less than we should about the results of treatment of simple chronic glaucoma, whether medical or surgical. Perhaps the follow-up work of the new medical social service workers (ophthal-

mological) may shed more light on this but as yet it has not. The expert and large operator occasionally gives us some statistical figures, but the tendency is to report the results when the patient is discharged from the hospital, and cases notoriously often have recurrence of tension after longer or shorter periods. It is probably the more or less occasional and average operator who does most of the work, and his results are never published, and are certainly not so good.

Dr. Green is quite right when he says the ordinary clinic patient, who is notoriously careless about carrying out the details of his medical treatment, ought to be operated upon as soon as possible; but he needs watching after an operation almost as much as before. Neither should it be forgotten that careless and unintelligent patients are just as common in private practice as in public, and need supervision and follow-up just as much.

The miotic treatment seems to be entirely out of fashion, but, as Dr. Green points out, it is very effective in certain types of cases, and here again failure is often the result of insufficient watching and good judgment. We see patients who ostensibly use their drops as directed and yet do not get the requisite pupillary contraction and hence fail to get the maximum reduction of tension. Adrenalin and ephedrine have certainly helped the action of miotics very remarkably, but the moment the patient shows signs of slipping he should be treated surgically.

We all pay too much attention to our tonometric readings as guides to surgery. Patients whose tension is only slightly above the average normal are not necessarily in danger, nor are those slightly below absolutely safe. In such cases it is the careful and repeated study of blind spots and fields that tells the story and not the tonometer.

E. M. A.

Surgical Treatment of Separated Retina by the Galvanic Method

● C. B. WALKER (*American Journal of Ophthalmology, 19:558-570, July, 1936*) reports the treatment of separation of the retina with electrolytic alkali employing multiple galvanic micro-needle punctures according to the method of Vogt, as described in 1934. Some changes in technique were made. With the author's method the anode is not placed on the sclera, but as far away as the shoulder; the galvanic voltage is raised to 45. Fine, non-breakable iridium-platinum needles are employed. The author has assembled a special galvanic unit which can be used separately or connected to a diathermy machine, so that either the galvanic or the diathermic current can be employed by a single turn of a tripolar switch. The operation is done under direct ophthalmoscopic observation. The author has found that with the galvanic method there is less reaction and less scar formation and less opacification of the vitreous than with other methods, and that if reattachment is not obtained, a secondary operation by any method can be done without difficulty. Of the first 17 cases treated by the galvanic method alone or with a small amount of additional micro-puncture diathermy (in 3 cases), reattachment was obtained in 15 cases (88.2 per cent.) with satisfactory field and central vision. In 16 cases in which the galvanic method alone was used there were 10 primary reattachments; of the 6 failures none showed severe reaction, and all were treated again. In 2 of these 6 cases, the galvanic method was used for the secondary operation with a good result in one. The other case and all the other 4 failures with the galvanic method were treated by diathermic micropuncture. In all these cases the tears were larger than 1½ disc-diameters. The author is of the opinion that the galvanic operation is the "method of first choice" in the treatment of retinal detachment except when a tear is 2 or more disc-diameters in size.

Optic Nerve Atrophy of Tabes and Its Treatment

● J. SOBANSKI (*Archiv für Ophthalmologie, 135:401-430, May 8, 1936*) reports a study of the optic nerve atrophy in tabes. In the tabetic patients studied who showed beginning or advanced optic nerve atrophy, he found that the diastolic blood pressure was below normal, not only generally but locally in the central retinal artery; also that the intra-ocular pressure was increased, so that it was higher than diastolic blood pressure in the retinal arteries. This naturally interferes with the normal blood supply to the optic nerve, and is, the author believes, the essential cause of the optic nerve atrophy in tabes. In the treatment of tabes with optic nerve atrophy, he advises the use of cardiac tonics which

(Continued on page 32)

Cultural Medicine

OLD TRAILS

III

THE eighteenth century was motivated by a growing realization of the universality of the reign of natural law. Galileo had early determined the method of research and Newton, later, had determined its meaning, which was "a working universe wholly independent of the Spiritual Order." So medicine, in the eighteenth century, in so far as it was scientific, merely reflected the influence of a new age bent upon weighing and measuring everything ("the only investigations that are worth while") and dispensing with medievalism. A new philosophy ruled the minds of men.

The first half of the eighteenth century, with respect to medicine, was largely given to classification of accumulated knowledge in the fields of chemistry, anatomy, physiology, microscopy and epidemiology.

Real progress in the eighteenth century is chiefly associated with the names of Boerhaave, Haller, Morgagni, Réaumur, Auenbrugger, Stephen Hales, Spallanzani, John Hunter, Wolff, Pinel and Jenner.

In America Boylston, Morgan, Shippen and Rush were the outstanding figures of the eighteenth century.

Herman Boerhaave's (1668-1738) preeminence in medical history is due to the remarkable advance which bedside and postmortem work underwent at his hands at Leyden. When a patient died the relation of the lesions found to the symptoms from which he suffered during life was demonstrated—a method of instruction which is still fundamental in our medical schools.

Boerhaave also brought all the known sciences to the service of his patients. He was chemist, botanist, anatomist, teacher, clinician, pathologist, scholar, wise philosopher and humanist. All in all, he may be called the greatest physician of modern times. Compare modern specialism with such versatility!

Through his pupils, Boerhaave may be credited with the foundation of other great schools, such as that of Edinburgh.

Albrecht von Haller (1708-1777), a Swiss, has been called one of the most accomplished men of all time and perhaps the most voluminous of all scientific authors. But it is as a physiologist that this great pupil of Boerhaave stands out preëminently. He elucidated the mechanics of respiration, explained how bone is formed, demonstrated the development of the embryo, studied the action of the digestive juices, and placed the physiology of the nervous system upon its modern scientific basis.

Motion and sensation were studied by Haller as a modern worker in physiology would study them and the concepts that he introduced are still with us. Haller is notable for his ability to think with but little recourse to the metaphysical speculations so characteristic of many of his colleagues. It required only the later work of Charles Bell (1774-1842) to bring to full fruition the views of Haller on the nervous system.

Giovanni Battista Morgagni (1682-1771), a professor of Padua, first formulated in a thoroughgoing way the principles of how the body acts when diseased, advancing enormously the pioneer work of Benivieni (*circa* 1440-1502) and Wepfer (1620-1695). Much had been done for physiology; Morgagni began to do something big for morbid anatomy. What Boerhaave treated speculatively Morgagni fully accounted for. His great work *On the Sites and Causes of Disease* is amazingly modern in its recital of case histories and autopsies and in its use of the "anatomical concept" with respect to lesions and symptoms. Much of to-day's naked-eye pathology goes straight back to Morgagni.

An advance of first-class importance in the eighteenth century was Leopold Auenbrugger's (1722-1809) introduction of percussion. But the Viennese physician's remarkable method attracted no interest until Corvisart, physician to Napoleon, popularized it in the last year of its inventor's life. Along with Laënnec's auscultation (1819) it became the basis of Skoda's (1805-1881) nineteenth century teachings in Vienna.

Eighteenth century surgery was aided by the improved knowledge of normal and pathological anatomy, but still awaited the anesthesia and antisepsis that were to raise it to such a high pinnacle in the twentieth century. The greatest surgeon of the century was John Hunter (1728-1793), who, while he introduced no new fundamental principles, did introduce a new spirit. That is to say, he made a science of what had merely been until his time an art. His method of dealing with aneurysm is still in vogue, while such institutions as museums of natural history are lineal descendants of the Hunterian Museum in London.

France was especially distinguished in surgery during the eighteenth century, and Petit, Anel, Brasdor, Desault, Chopart and Littré were great names in her Pantheon.

The Italian school during this century was brilliantly ornamented by Antonio Scarpa (1747-1832), whose name is immortalized in that triangle of the thigh so familiar to every medical man.

The obstetric forceps came into wider use about the middle of the eighteenth century, due to the fact that the crude Chamberlen instrument was superseded in 1721 by the daddy of the modern forceps—Palfyn's.

Caspar Friedrich Wolff (1733-1794) modernized the knowledge of embryology derived from Harvey and Malpighi.

It was during the eighteenth century that the use of mercury in the treatment of syphilis was rationalized. It had been clumsily used since the fifteenth century, while the differential diagnosis between syphilis and leprosy—the latter being then an extremely common disease—was not often clearly made. Even the venereal origin of syphilis was long uncertain. But during the eighteenth century diagnostic criteria were well outlined and effective and standardized treatment with mercury was inaugurated.

Scientific, humane treatment of the insane dates from Philippe Pinel (1745-1826), who in the latter part of the eighteenth century removed the chains from his insane charges in the Paris hospitals, and from William Tuke, the Englishman, who in 1792, at York, abolished cruel restraints.

Among the most interesting advances in physiology during the eighteenth century was the demonstration by René Antoine de Réaumur (1683-1757) that the gastric juice would dissolve food in a test tube kept at body temperature. This was important since before his time the solution of food in the stomach was thought to be due solely to the churning mechanism of that organ.

And then the Abbate Lazaro Spallanzani (1729-1799) distinguished between putrefaction, fermentation and digestion, the last of which he showed was associated with a solvent power of special nature. He divined that the gastric juice contained a free acid and observed that it curdled milk (the "rennet" action). He proved that the gastric juice was secreted by the stomach itself and that it was not introduced from other organs.

One of the most fascinating investigations prosecuted during the eighteenth century was that of Stephen Hales (1677-1761) upon blood pressure. Like Sir Christopher Wren, whose introduction of intravenous medication in the seventeenth century we have already alluded to, Hales was not a physician. This clergyman, biologist, mathematician and physicist devoted himself to a study of the dynamics of the circulation. By means of the pressure gauge and tubes tied into the blood vessels of animals he laid the foundation of our modern methods of measuring and recording blood pressure. It was Hales who showed that the caliber of the capillaries varies under various influences—a fact of enormous importance in theory and practice to-day, and he measured the velocity of the circulation in the various vessels. He approached the problem of the cardiac mechanism in the same spirit as would any investigator of to-day, and also did valuable work on respiration.

Edward Jenner (1749-1823), in 1796, substituted vaccination for inoculation against smallpox, and showed that, after such vaccination, the usual inoculation with mild-type smallpox virus, as had been hitherto employed against the disease, failed to infect. The real importance of this discovery is that it started the study of immunity and inaugurated preventive medi-

cine, upon which pegs so much of modern medicine hangs. But for Jenner, the work of Pasteur, Lister and Koch would not have been.

Famous German leaders of the period were Heister, Lieberkuehn, Meckel, Zinn, Wrisberg, von Soemmering and Richter.

Eighteenth century English names that have much meaning for the physician are Pott, Parry, Heberden, William Hunter, Fothergill, Lettsom, Hewson, Cullen, the three Monros, Huxham, Cheselden, White, Bell, Abernethy, Radcliffe, Mead, Askew, Pitcairn and Baillie.

It was Zabdiel Boylston (1680-1766) who awoke America medically by introducing inoculation against smallpox in 1721. He was chased around Boston by a mob with a rope, without benefit of professional sympathy, and was thus a very early master of publicity for a great cause. The ferment that he started has never ceased.

Benjamin Rush (1745-1813) was a pioneer in hygiene who preached fresh air, cleanliness and temperance far in advance of his time. He was the first American alienist and wrote the first systematic treatise along what would now be called psychiatric lines. His account of a yellow fever epidemic at Philadelphia is a classic.

John Morgan (1735-1789) insisted on starting a good medical school in America and the Medical Department of the University of Pennsylvania (founded in 1765) is his child. He was what we would call today the Surgeon General of the Continental Army for a time.

William Shippen, Jr. (1736-1808), was a co-founder, with Morgan, of the University of Pennsylvania medical department and succeeded Morgan as Surgeon General.

These were all Edinburgh men.

Later came the eighteenth century medical schools of Kings College in New York, Harvard, the College of Philadelphia, and Dartmouth.

There were, before the close of the eighteenth century, important medical societies and libraries in a number of cities and states, and medical journals were published in New York, Philadelphia and Boston.

Osler thought of the eighteenth century as a period in which fantastic theories controlled much of the practice.

Garrison indicts the eighteenth century for its high infantile and adult mortality, its devasting epidemic diseases, the worst hospital management on record, and its brutal mishandling of the insane, the deaf, the dumb, the blind and the poor. He condemns its theories and systems and its tedious and platitudinous philosophisings.

Boas considers the eighteenth century an era of "humanitarian idealism and general enlightenment."

Pagel and Singer interpret the eighteenth century as a period of clarification and consolidation.

Seelig thinks that "the outstanding characteristics of the eighteenth century are the demonstration of the fullness of gross anatomy, the quickened spirit of practical medicine, the practical foundation of histology, pathology and physiology, and the outcropping of speculative philosophy that invaded medicine under the guises of animism and vitalism."

To the writer the eighteenth century appears to have been a period of loose individualism, brilliant in spots, and dull and defiant of natural facts too frequently, for all its materialistic philosophy. There was a growing body of real knowledge, but it was not, and could not be in the nature of things, organized and unified on a large scale in anything like the manner of today. In so far as organization was lacking there was not true science in the modern sense. But the evolutionary process was at work, and the nineteenth century was truly the child of the eighteenth, chaotic as it seems to have been from our relatively sophisticated point of view. The torch was never extinguished, however much it may have been dimmed in many quarters, and the clinic came into its own. At the worst, call it a breathing space wherein to store power and gather momentum for the vast leaps to be taken by the athletes of the nineteenth century. We have chosen to deal only with the high lights in the course of our inventory, while not unmindful of Garrison's characterization of the eighteenth century as the "Golden Age" of picturesque and successful quacks and much worse besides, and we have not gone into speculative doctrines such as vitalism and the theories of the Iatrophysicists and Iatrochemists, despite the fact that they are still influencing investigation (Virchow found it necessary to discuss "constructive vital spirit" in connection with his formulation of the cellular pathology), for one reason because no physiological thinker has yet appeared with a rational integration of these attitudes to the activities of living things.

To be continued

Medical Book News

• *All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn, New York.*

Edited by **TASKER HOWARD, M.D.**

CLASSICAL PARAGRAPHS

• It is Nature that puts together the bodies both of plants and of animals; and this she does by virtue of certain faculties which she possesses—these being, on the one hand, attractive and assimilative of what is appropriate, and, on the other, expulsive of what is foreign. Further she skillfully moulds everything during the stage of genesis; and she also provides for the creature after birth, employing here other faculties again, namely, one of affection and forethought for offspring, and one of sociability and friendship for kindred.

Claudius Galenus (A.D. 131-201.) On the Natural Faculties, Arthur J. Brock translation, G. P. Putnam's Sons, New York, 1916; p. 45.

Monograph on Otoscelerosis

OTOSCLEROSIS. By Louis K. Guggenheim, M.D. St. Louis, Louis K. Guggenheim [c. 1935]. 212 pages, illustrated. 4to. Cloth, $6.00.

• This is an original monograph which represents the result of many years of serious study. The many different theories as to the causation of otosclerosis are critically analyzed and the author's theory of regression is elaborated.

Guggenheim considers the localized osseous changes in the otic capsule as evidence of a regression to lower vertebrate forms. He calls attention to the fact that the oval and round windows and cochlea do not exist in these lower vertebrates.

The book is comprehensive in its treatment of the subject, including chapters on embryology, histopathology and case histories. It should find favor not only with the otologist, but with all those interested in the general subject of deafness. Such a work as this materially enhances our knowledge in a most difficult field of endeavor.

M. C. MYERSON.

The Ductless Glands in Outline

A B C OF THE ENDOCRINES. By Jennie Gregory, M.S. Baltimore, Williams & Wilkins Company [c. 1935]. 126 pages, illustrated. 4to. Cloth, $3.00.

• This book consists of a series of charts and diagrams explaining the functions and disturbances of the glands of internal secretions. The story of each gland and its relationship to the others in the system is worked up from the simpler to the more complex roles. The book is intended for the laity, especially for those who are interested in biology and in the newer concepts of science. A glossary of terms with their French, German and Italian equivalents will be found helpful to those who come in contact with foreign literature.

The book is valuable to those for whom it was intended and offers material aid in teaching the subject.

M. B. GORDON.

For the Serologist

THE SPECIFICITY OF SEROLOGICAL REACTIONS. By Karl Landsteiner, M.D. Springfield, Charles C. Thomas [c. 1936]. 178 pages. 8vo. Cloth, $4.00.

• This layout of the subject by an expert is alone in its field. It develops the complete subject through natural antigens and antibodies, then artificial, and finally the recent accomplishments in the chemistry of cellular non-protein antigenic substances. The plan of the German text, appearing three years ago, has been followed but has been considerably enlarged by the addition of recent material. It is an excellent volume for advanced students and research workers in this field. The bibli-

ography alone includes over eleven hundred references and occupies twenty-three pages.

IRVING M. DERBY.

Levine on the Heart

CLINICAL HEART DISEASE. By Samuel A. Levine, M.D. Philadelphia, W. B. Saunders Company [c. 1936]. 445 pages, illustrated. 8vo. Cloth, $5.50.

● The periodical contributions to our knowledge of heart disease presented by Dr. Levine have been familiar to readers of medical literature for many years. It is with much satisfaction that his readers now find themselves supplied with a correlated account of the subject from his pen. The book is written primarily for the benefit of the general practitioner, briefly enough to be easily readable and comprehensive enough to supply a satisfactory guide. It will no doubt be read with interest by more advanced students of cardiology for the opinions expressed by an acknowledged authority, and incidentally, its methods of presentation can scarcely fail to influence medical teachers. Undergraduates and internes will find it a most satisfactory introduction to the subject. Through its pages they should acquire a maturity of outlook that is so often late in appearing, or is never acquired. The sense of perspective is maintained in a way that would be difficult or impossible in a larger book. The reader is led to orient the patient's present condition in relation to his past and his future. Nowhere is this specifically advised, but the habit is fostered by the manner of survey of each condition. This, to the mind of the reviewer, is the outstanding merit of this sound, clear exposition of our present knowledge of heart disease.

TASKER HOWARD.

The Swabian Country Doctor

BAUERNDOKTOR. By Menhofers Franzef. Munchen, Otto Gmelin [c. 1935]. 184 pages. 8vo. Paper, bound RM. 3.60, unbound RM. 2.81.

● This is a charming little brochure of 184 pages, descriptive of the everyday doings of a Swabian doctor, over a period of some thirty odd years of country practice. It is a colorful picture of peasant life, in relation to medicine, with its joys, sorrows and hardships and, as a background, the sacrifices of a young man with a university training, whose love of the great out-of-doors and peasant ancestry proved a lure which he could not withstand. The author gives us an interesting history of emergent work, especially obstetric, in a difficult environment, coupled with a strong sense of humor and a simple philosophy of life. It is well worth reading.

J. M. VAN COTT.

A New Translation of Harvey's Work on Generation

AN ANALYSIS OF THE DEGENERATIONE ANIMALIUM OF WILLIAM HARVEY. By Arthur W. Meyer. Stanford University, Stanford University Press [c. 1936]. 167 pages, illustrated. 8vo. Paper, $3.00.

● Harvey's long and speculative treatise appeared first in Latin in 1651. Translated into English two years later, and again in 1847 it has escaped the close attention of those who have studied the writings of the great discoverer of the circulation of the blood. Dr. Meyer has had a new translation made, and presents an analysis of its important context.

Harvey attempted to fill in gaps in embryology by the objective method, but with small success so far as generation is concerned. Though Huxley thought this a remarkable treatise, apparently it is not so. It is however of tremendous interest, as showing how one who knew so well how to "search out the secrets of nature" was unable to separate himself from the philosophy and ignorance of that dark age of science. A remarkably well done, critical and dispassionate analysis like Meyer's is of great value and interest.

CHARLES A. GORDON.

The "Bloodless Surgeon's" Own Story

MY LIFE AND WORK. The Search for a Missing Glove. By Dr. Adolf Lorenz. New York, Charles Scribner's Sons [c. 1936]. 362 pages, illustrated. 8vo. Cloth, $3.50.

● Dr. Adolph Lorenz has written a very interesting life-story of himself and his achievements in the field of orthopaedic surgery. His ascension to success was very gradual and was the product of hard work and unremitting energy in the face of innumerable hardships.

Dr. Lorenz was born of humble and poor parents. He struggled through school as a choir boy; and even as a medical student in Vienna, he led a penurious existence.

The specialty of orthopaedic surgery was forced upon the author by a rather peculiar set of circumstances. As a young doctor, he was launched upon a career in surgery. However, he soon found that he was gradually being poisoned by the carbolic acid spray, then universally used to achieve asepsis in the operating room, and he re-

alized that he could not continue in this field. He heeded the advice of his superior and substituted "dry surgery" for "wet surgery." Once started in this then little-known branch of surgery, he built his reputation steadily, and it was not long before he was in demand as a consultant in many European countries.

His triumphal entry into the Western Hemisphere was very spectacular. He came to the United States at the request of a Chicago millionaire to treat the latter's daughter for a congenital hip-joint disease. The malady yielded to his treatment. Fame and fortune followed him wherever he went.

The World War brought ruin to all his savings, and at the age of 70 he was obliged to begin anew.

The concluding chapters are noteworthy for two general observations—one on orthopaedic surgery, the other on the practice of medicine in general. Dr. Lorenz maintains that orthopaedic surgery may have a very limited future. By improving the general condition of the needy, by providing them with food, clothing, housing and reasonably sanitary conditions, the number of cripples could be minimized and the need for orthopaedic surgery correspondingly reduced. As for the medical profession generally, he makes the following suggestion: "It would be a good thing for the medical profession, and for surgeons especially, if their work could be done without regard to money. The physician should be paid out of public funds so that he has no other care than the welfare of the patient."

This is a well-written book, beautifully edited and interesting to read.

WILLIAM RACHLIN.

Textbook for Nurses

PEDIATRIC NURSING. By John Zahorsky, M.D. St. Louis, The C. V. Mosby Company [c. 1936]. 568 pages, illustrated. 8vo. Cloth, $3.00.

● The material in this book is well arranged and the questions at the end of the chapters are of help in ascertaining what the pupils have learned.

The author is a responsible pediatrician and where, in some small matters, and perhaps a little larger, he differs in advice from that which is traditional, the critic must either go along with him or justify his own disagreement. His position is essentially sound.

The book can be cordially recommended to teachers of nurses for this subject.

W. D. LUDLUM.

More International Clinics

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc. Edited by Louis Hamman, M.D. Volume 1, 46th Series, 1936. Philadelphia, J. B. Lippincott Company [c. 1936]. 314 pages, illustrated. 8vo.

● There are certain features of practical importance in this issue that are not yet to be found in the current text books.

In the chapter on "Progress of Surgery during 1935" the authors have presented a valuable summary of newer developments. The highlight appears to be that which concerns the relief from hypertension through sectioning of the splanchiic nerves and a portion of the adrenal gland. The results seem amazing and unbelievable. Not only have there been reported sharp reductions in blood pressures, but retinal hemorrhages, papilledema, and otherwise permanent and serious manifestations are said to disappear following such surgical procedure.

An interesting concept is offered to explain certain cases of pernicious anemia. The existence of pernicious anemia has been partly attributed to an atrophy of the intrinsic secreting cells found either in the normal gastric mucosa or in aberrant gastric cells. The freedom of that disease in gastrectomy patients has been explained or traced to the existence of aberrant normally secreting anti-anemic hormone cells such as are found in Meckel's diverticulum. The ramifications of this theory are fascinating, and offer interesting speculation.

Stovarsol, a pentavalent arsenic compound, is reported to be far superior to trivalent arsenic, such as tryparsamide and to malarial inoculations, because of its efficacy, its comparative safety even when used in very feeble and cachectic patients, and in its simplicity of administration.

Arteriosclerosis of the lower extremities in cases of diabetes mellitus is a condition to which the practitioner is forewarned because it is apt to be symptomless in its early stages.

There are a few chapters on familiar topics discussed in the nature of a review, such as dangers from sedatives and hypnotics, pulmonary embolism, and basal pulmonary tuberculosis, also considerations of rarer conditions such as Simmonds disease, onchocerciasis, and other unusual subjects.

EMANUEL KRIMSKY.

• THE PRACTICAL MEDICINE YEAR BOOKS. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Series 1935. Chicago, The Year Book Publishers, 1935-36.

1935
The Practical Medicine Year Books

THE 1935 YEAR BOOK OF GENERAL MEDICINE. Edited by George F. Dick, M.D., and others. 848 pages, illustrated. 12mo. Cloth, $3.00.

● Again the year book presents not only the fundamental facts of the many medical conditions met in daily practice, but includes the important advances in the various departments during the past year. The importance of newer methods of diagnosis and treatment of non-tuberculous conditions in the lungs and bronchi have been stressed. Advances in the concept of cardiac diseases with differential methods in diagnosis and treatment have been noted Considerable attention has been given to developments in the diagnosis of blood changes and diseases.

To those wishing to keep abreast of the progress in medicine, a careful study of this volume will be of the greatest value.

HENRY M. MOSES.

THE 1935 YEAR BOOK OF GENERAL SURGERY. Edited by Evarts A. Graham, M.D. 838 pages, illustrated. 12mo. Cloth, $3.00.

● This is one of the ten Practical Medicine Year Books, which are now in their thirty-fifth year. "General Surgery" is edited by Dr. Evarts A. Graham, and the reader is assured again of discrimination and judgment in the selection of the articles cited and reviewed. The book has 809 pages, of which the last 56 are devoted to Orthopedic Surgery, and the others to subjects under a gross anatomical classification, besides the consideration of such special subjects as, Anesthesia. The editor comments on the richness of the literature on peripheral vascular disease and thoracic surgery but has not overemphasized these subjects in his text. The literature of General Surgery must be almost limitless in amount and the selection of articles for abstracting and discussion more than the mere problem of pages. It is evident that a conscientious effort has been made by the editor to acquaint the reader with new aspects of old questions and with the things that speak of progress. This, of course, is the purpose of such an Annual and it is felt that the reader will not be disappointed with the 1935 Year Book of General Surgery.

JOSEPH RAPHAEL.

THE 1935 YEAR BOOK OF THE EYE, EAR, NOSE AND THROAT. The Eye edited by E. V. L. Brown, M.D., and Louis Bothman, M.D. The Ear, Nose and Throat edited by George E. Shambaugh, M.D., Elmer W. Hagens, M.D., and George E. Shambaugh, Jr., M.D. 638 pages, illustrated. 12mo. Cloth, $2.50.

● It is manifestly impossible to review a year book summarizing hundreds of articles, except insofar as to discuss cursorily those articles which have been of especial interest to the reviewer.

From the standpoint of the eye, one may be interested in a case report on the nonsurgical reattachment of the iris in a case of traumatic iridodialysis; an experimental study on ocular disturbances, such as cataract resulting from asphyxia; a method for deepening the anterior chamber in glaucoma and cataract operations; more recent studies in corneal grafting; a hand suction instead of a motor-driven device for Barraquer's total extraction method of cataract; the most unusual precautions in preventing ophthalmia neonatorum in one maternity hospital; a review of the applications of diathermy in eye diseases; the complete return of sight in an amblyopic eye with persistent treatment; and an experimental production of exophthalmos in animals.

In the section on otolaryngology, the reviewer was especially interested in: Collected studies showing the possible association of sinus and middle ear disease; the absorption of various drugs when injected into the middle ear. The analogy of drug absorption and pus absorption did not appear quite convincing because of the relative speed of the two, and because of the questionable role of the ear as a focus of infection; the articles on mastoiditis are always of interest, even if they are but a reiteration of well-established sound principles; the subject of petrositis has become rightly one for serious attention, but wrongly one for undue tampering, and as

in other instances, the editorial comments in conjunction with each of the articles are often more pointed and instructive than the articles themselves.

There are other interesting articles too numerous to mention, and the reader will be well repaid even for but a cursory glance at its wealth of worth-while information.

EMANUEL KRIMSKY.

THE 1935 YEAR BOOK OF PEDIATRICS. Edited by Isaac A. Abt, M.D. 520 pages, illustrated. 12mo. Cloth, $2.25.

● To the pediatrist this yearly review has become almost indispensable. The literature is better covered year by year, and if the volumes are kept in one's library it becomes surprisingly easy to look up in a short time the gist of the literature on any common and a great many rare pediatric subjects.

THURMAN B. GIVAN.

THE 1935 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY. Obstetrics edited by Joseph B. DeLee, M.D., and Gynecology edited by J. P. Greenhill, M.D. 688 pages, illustrated. 12mo. Cloth, $2.50.

● One of the Practical Medicine Year Books which have been popular for so many years, this little volume is as good as its predecessors. As usual, the material has been selected with excellent judgment, so as to give the reader a brief but absorbing review of important contributions of the year in this field. The informal comments of the editors are as good as ever, and add immensely to the value of the book. Though it does not pretend to be comprehensive, the Year Book as a source of ready reference can not be surpassed.

CHARLES A. GORDON.

THE 1935 YEAR BOOK OF GENERAL THERAPEUTICS. Edited by Bernard Fantus, M.D. 460 pages, illustrated. 12mo. Cloth, $2.25.

● As usual, this presents a very useful summary of the literature of the year from a practical standpoint. The new iso-alcoholic elixir of the N.F., is explained, with its variable alcoholic strength, according to the drug to be administered in it. A few of the interesting developments may be mentioned. Continuous gastric suction by the Wangensteen Method is described. A very good article by William Sharpe on Lumbar Puncture is abstracted in detail. Histamine tests, Hexylresorcinol as an anthelmintic, a new Mercuric Chloride tincture for external use to replace some more expensive proprietaries, are noted. Silver Nitrate has been found to have its limitations in the prevention of Ophthalmia Neonatorum.

Foot hygiene is discussed and Sodium Hypochlorite in a 1% solution has been found to be a cheap, harmless and effective prophylactic agent for ringworm of the hands and feet. Chloramine therapy for halitosis should be more effective than some of the advertised articles, (0.3 gm. tablet in 30 c.c. water), to wash teeth, tongue and rinse mouth. Drugs in Malaria, the use of Scarlatinal Antiserum in Puerperal Streptococcal Septicemia and in Acute Rheumatism, the efficiency of Oxygen by nasal catheter, the indications for calcium and Vitamins are abstracts of value, with many others of the same interest.

W. E. MCCOLLOM.

THE 1935 YEAR BOOK OF UROLOGY. Edited by John H. Cunningham, M.D. 452 pages, illustrated. 12mo. Cloth, $2.25.

● Dr. Cunningham has very ably presented a concise and thorough review of the more important advances and significant contributions to urology for another year. He has sensed a growing appreciation of the advantages gained by the urologist from association with allied medical endeavor. He has given more consideration than formerly to the review of foreign literature and ventures the opinion that the surgery of the adrenal may well be within the province of the urologic surgeon. Considerable attention is given to the study of renal calculi and their causation, drawing attention to the important work of the biochemists. A goodly portion of the book is given over to a chapter on "general considerations" which should prove of value to every clinician. The remainder of the work is a review arranged by regions beginning with the kidney and ending with the genitalia, and specific references to the literature are given at the foot of the page throughout the work. The year book is a storehouse of summarized information, well illustrated, setting forth technic and experiences having major clinical importance.

AUGUSTUS HARRIS.

THE 1935 YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND ENDOCRINOLOGY. Neurology edited by Hans H. Reese, M.D.; Psychiatry edited by Harry A. Paskind, M.D.; Endocrinology edited by Elmer L. Sevringhaus, M.D. 775 pages, illustrated. 12mo. Cloth, $3.00.

● Medical literature is becoming voluminous to the extent that even the specialist cannot possibly keep up with the contributions to his own particular field, therefore the need for such a publication as the

Year Book. The 1935 volume contains an excellent summary of the principal contributions in its particular specialties. The section on Neurology is edited by Dr. Reese, Psychiatry by Dr. Paskind and Endocrinology by Dr. Sevringhaus. The field of neurology is thoroughly covered. Behavior disorders of children are discussed under psychiatry. However, psychoanalysis has been omitted. Endocrinology has been thoroughly surveyed and special emphasis has been placed on the hormones of the pituitary gland. Numerous charts and illustrations as well as an index of both authors and subjects enhance the value of the book. As a whole it is an indispensable publication to the neurologist, the psychiatrist and the endocrinologist.

IRVING J. SANDS.

THE 1935 YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY. Edited by Fred Wise, M.D., and Marion B. Sulzberger, M.D. 736 pages, illustrated. 12mo. Cloth, $3.00.

● It seems barely necessary to write anything in review on the Year Book of Dermatology, for those who have been using it each year, know how valuable it is. The 1935 Year Book sets a fine mark in the literature reported, and in its presentation of that literature. Frequently, comments are made by the editors, which seem to be entirely in order.

The article on the modern treatment of eczema, which is written expressly for general practitioners, is an excellent one, properly advising them of the generalizations in treatment of this condition, and particularly warning them of the errors they should avoid.

E. ALMORE GAUVAIN.

THE 1935 YEAR BOOK OF RADIOLOGY. Diagnosis edited by Charles A. Waters, M.D., and Therapeutics edited by Ira I. Kaplan, M.D. 580 pages, illustrated. 8vo. Cloth, $4.50.

● The 1935 Year Book of Radiology preserves the excellent qualities of preceding volumes; the number of abstracts and illustrations is considerably increased. The book provides an easy means of keeping up to date on outstanding contributions to the world's radiological literature for the latter part of 1934 and the first half of 1935.

Of particular interest are the articles on roentgen therapy in inflammatory conditions, whooping cough, vasomotor disturbances of the lower extremities, ureteral fistula, otorrhea, tuberculosis, meningitis, angina, salivary fistula, tonsillar hypertrophy, and radio-diathermo-galvano-therapy and fever therapy alone or combined with roentgen rays.

L. MILFORD ANDERSEN.

OTHER BOOKS

Second Edition of Murray's Diagnosis

EXAMINATION OF THE PATIENT AND SYMPTOMATIC DIAGNOSIS. By John Watts Murray, M.D. Second edition. St. Louis, The C. V. Mosby Company [c. 1936]. 1219 pages, illustrated. 8vo. Cloth, $10.00.

● This second edition proves the value of this unusual book in which the author presents a complete method of examination of the patient with emphasis upon the complaints of the patient and the examination which follows. The volume is divided into two sections; the first comprising 430 pages gives a detailed outline of general considerations concerning history taking and is most complete. The second section of 800 pages presents a consideration of the diseases of single organs or systems of the body. A careful study of this complete work causes one to wonder at all the manifestations of abnormal conditions, and gives an excellent review of physical diagnosis. It instills the idea of thoroughness. This is a most carefully compiled, well-written, interesting, scholarly book.

HENRY M. MOSES.

On Government in Medicine

SOCIAL SECURITY. By Edward H. Ochsner, M.D. Chicago, The Social Security Press [c. 1936]. 231 pages. 8vo. Cloth, $.50.

● It must be a sort of a shock to many professional social reformers to see doctors of medicine, actual practitioners of medicine and surgery, taking an increasing public interest in social questions.

True, social work of the physician is nothing new; it has expressed itself in so many channels for the individual sick, for hospitals, for charity directly to the poor, and in work for the general public health throughout history. Because of its unobtrusiveness, its performance away from the limelight of publicity and its human relationship, this work was not fully recognized nor appreciated by the professional reformer, and the knowledge and experience of the doctor not respected. Doctors

however, have begun to express their opinions to the world at large, and these opinions on social questions are commanding more and more of the public's attention.

The author of this book is a doctor of medicine, well qualified for the work he has assumed. Early in his professional life he spent some years in cities of Germany, Austria and Sweden, where he gained intimate knowledge of such social matters as health insurance and its workings. Later his years in the practice of surgery as hospital attending surgeon, as a professor of clinical surgery, and for four years as President of the Illinois State Charities Commission, have increased these qualifications.

In these twenty-eight chapters he discusses many phases of those questions that now have a special—a burning interest for physicians. The role of governments and their efficiency in handling the questions, administrative and legislative corruption, excessive costs of the systems of social insurance service surveys and their significance, the quality of medical service rendered, the undermining of character and other related subjects, as well as the kind of suggestions, are here presented. The book is small, (231 pages), but it deals quite adequately and efficiently with the subject, and there is no question left in the reader's mind of the deep sincerity of the author. Nearly every physician should find information in this book which will be of interest and of value to him, and be helpful in the correction of some of the impractical, half-studied proposed social experiments of the day.

THOMAS A. MCGOLDRICK.

Hypertension in Ceylon

HIGH BLOOD PRESSURE AND ITS COMMON SEQUELAE. By Hugh O. Gunewardene, M.D. Baltimore, William Wood & Company [c. 1935]. 172 pages, illustrated. 8vo. Cloth, $3.00.

● This is an interesting volume written by a physician practicing in the island of Ceylon—interesting because it contains valuable clinical observations made by a busy practicing physician. Those who seek in the volume a painstaking laboratory study of hypertension will be disappointed but those who look for interesting clinical points will be rewarded. The author's emphasis upon the importance of the diastolic pressure is valuable. He goes so far as to state the diastolic reading before the systolic in his clinical descriptions. The chapter on clinical types is a little disappointing for when one analyses the material carefully he finds that the clinical types are vague and not easily separated. Throughout the book the author emphasizes the importance of sedentary habits and overeating in the cause of essential hypertension with heredity and diathesis playing only a secondary part. Dysfunction of the liver may be responsible for the elaboration of the pressor substances.

In early mild cases of hypertension he carries his theory into practice by combining physical exercises with restricted food intake in his treatment. Electrical stimulation of the skeletal muscles he considers of value in reducing blood pressure.

E. P. MAYNARD, JR.

Mrs. Rhinehart's Novel

THE DOCTOR. By Mary Roberts Rinehart. New York, Farrar & Rinehart, Inc. [c. 1936]. 506 pages. 8vo. Cloth, $2.00.

● Here's a story about a physician, his professional struggles, his difficulties of adjustment—all done in a readable form, if you like Mrs. Rinehart's style.

In general, the medical profession will agree in her medical expressions of opinion or comment in her descriptions or in the conversations of her character.

Interesting summer reading for the vacationing doctor.

A. N. THOMSON.

An Important Discussion on Thyroid Diseases

ZWEITE INTERNATIONALE KROPFKONFERENZ IN BERN, 10-12 August, 1933. Verhandlungsbericht herausgegeben von Dr. Otto Stiner. Bern, Hans Huber [c. 1935]. 698 pages, illustrated. 8vo. Paper, Fr. 25.

● This volume of 698 pages comprises the program, scientific reports, papers, discussions and general conclusions pertaining to the three major topics in discussion at this conference, namely (1) Hyperthyreosis, (2) Etiology of Endemic Goitre, (3) Malignant Goitre. The papers on hyperthyreosis include reports on the distinct pathological, anatomical picture of Basedow's Disease; on the preoperative use of iodine, changes in the thyroid gland as a consequence. Furthermore, the subject of changes in the organs other than the thyroid are considered; the clinical entity of toxic adenoma is supported; clinical considerations with especial reference to the sympathetic nervous system are emphasized as also the interrelation of the anterior lobe with the pituitary and the thyroid gland. Disturbances in metabolism are further considered.

The etiology of endemic struma is critically and extensively considered in a number of valuable reports. The importance of iodine deficiency is stressed, not necessarily as the primary factor, but as an important incidental factor. The importance of calcium and phosphorus intake is stressed, as also the matter of infection, impure drinking water, and geographic relations. Finally, malignant goitre receives consideration. There is little new under this subject. The difficulty of differentiation between the benign and malignant tumors is indicated. Because of the frequent occurrence of malignancy in adenomatous goitre, early operation is recommended for the latter. Malignancy may arise at any age practically.

This volume is especially recommended to advanced students of thyroid disease. Many of the papers are very complete and detailed, and opportunity is given to learn the theories and beliefs of many foreign investigators on the subjects under consideration in this conference. The reports appear in German, French and English and appended to each report is a summary in these three languages. Thus one unacquainted with a reading knowledge of either German or French is enabled to read all the reports in English. A considerable number of plates, charts and diagrams are included.

EMIL GOETSCH.

BOOKS RECEIVED

Books received for review are acknowledged in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

THE HISTORY OF THE PHILOSOPHY OF MEDICINE. By L. A. Turley. Norman, University of Oklahoma Press [c. 1935]. 43 pages. 8vo. Paper, $.50.

ESSENTIALS OF COSMETOLOGY. A handbook of concise and practical information for all who are interested in the maintenance or enhancement of the healthy appearance and natural beauty of the body. By H. O. Bames, M.D. Los Angeles, H. O. Bames, M.D. [c. 1936]. 98 pages. 8vo. Cloth.

THE TOXAEMIAS OF PREGNANCY. By Dame Louise McIlroy, M.D. Baltimore, William Wood & Company [c. 1936]. 355 pages. 8vo. Cloth, $5.00.

THE OPERATIONS OF SURGERY. By R. P. Rowlands, F.R.C.S., and Philip Turner, F.R.C.S. Eighth edition, volume 1. Baltimore, William Wood & Company [c. 1936]. 1045 pages, illustrated. 4to. Cloth, $10.00.

ESQUISSES CLINIQUES DE PHYSICOTHÉRAPIE. By Dr. Joseph Rivière. Volume 1, 1910, "Traitement rationnel des Maladies chroniques." Paris, Bouchy et Cie [c. 1910]. 314 pages, illustrated. 8vo. Cloth.

ESQUISSES CLINIQUES DE PHYSICOTHÉRAPIE. By Dr. Joseph Rivière. Volume 2, 1932, "Genèse de la Physicothérapie des Néoplasmes." Paris, Norbert Maloine [c. 1932]. 300 pages. 8vo. Paper.

UN DEMI-SIÈCLE DE PHYSICOTHÉRAPIE. By Dr. Joseph Rivière. Volume 4, 1934. Paris, Chaix [c. 1934]. 555 pages. 8vo. Cloth.

ENDOCRINOLOGY IN MODERN PRACTICE. By William Wolf, M.D. Philadelphia, W. B. Saunders Company [c. 1936]. 1018 pages, illustrated. 8vo. Cloth, $10.00.

HEART DISEASE AND TUBERCULOSIS. Efforts Including Methods of Diaphragmatic and Costal Respiration to Lessen Their Prevalence. By S. Adolphus Knopf, M.D. Livingston, Columbia County, New York, The Livingston Press [c. 1936]. 108 pages, illustrated. 8vo. Cloth, $1.25.

FACTS ABOUT COMMERCIALLY CANNED FOODS. New York, American Can Company [c. 1936]. 34 pages. 8vo. Cloth.

HEALING: PAGAN AND CHRISTIAN. By George G. Dawson, M.A. New York, The Macmillan Company [c. 1935]. 322 pages. 8vo. Cloth, $3.25.

THEORY AND PRACTICE OF PSYCHIATRY. By William S. Sadler, M.D. St. Louis, The C. V. Mosby Company [c. 1936]. 1231 pages. 4to. Cloth, $10.00.

EXPERIMENTAL ENZYME CHEMISTRY. By Henry Tauber, Ph.D. Minneapolis, Burgess Publishing Company [c. 1936]. 118 pages, illustrated. 4to. Cloth, $3.50.

A MANUAL OF PRACTICAL OBSTETRICS. By O'Donel Browne, M.D. Baltimore, William Wood and Company [c. 1936]. 363 pages, illustrated. 8vo. Cloth, $6.50.

PSYCHOLOGY OF ADOLESCENCE. By Luella Cole, Ph.D. New York, Farrar & Rinehart [c. 1936]. 503 pages. 8vo. Cloth, $3.50.

WILLIAMS OBSTETRICS. A Textbook for the use of Students and Practitioners. By Henricus J. Stander, M.D. Seventh edition. New York, D. Appleton-Century Company [c. 1936]. 1269 pages, illustrated. 8vo. Cloth, $10.00.

INVOLVEMENT OF NERVOUS SYSTEM IN TRICHINASIS

H. HOUSTON MERRITT and MILTON ROSENBAUM, Boston (*Journal A. M. A.*, May 9, 1936), encountered two patients with neurologic complications of trichiniasis in the neurologic unit of the Boston City Hospital. The diagnosis in these cases was made with great difficulty. The involvement of the nervous system in trichiniasis may simulate polyneuritis, acute anterior poliomyelitis, encephalomyelitis and rarely meningitis. Cases presenting weakness of the muscles of the trunk and extremities with absent reflexes are the most common.

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